

# **Multi-Skilling**

**A pilot investigation of the Potential Impact of the Practical Design and Implementation of Multi-Skilling to optimise Employees and achieve improved Productivity within the Automobile Manufacturing Industry.**

by

**Owen Cassell Dickson**

**A Research Report submitted to the School of Community Development and Adult Learning in the Faculty of Community and Development Disciplines, University of Natal, Durban.**

**ABSTRACT**

In order to establish its status within the increasingly competitive global market South Africa needs to become a more active participant.

In economic terms the current conjunction has often been characterised as a period of revitalised capital accumulation based on globalisation which in turn has helped bring about new forms of production, distribution and consumption.

Globalisation involves the integration of the economies of nation states through market mechanisms accompanied by increased transitional flexibility of capital, labour and new forms of technology.

This insight of globalisation requires that we respond with greater competition and increased flexibility as we shift towards neo and post Fordist forms of work organisation rather than stick to outmoded practices of the past.

One possible response to the requirement for greater labour flexibility lies in Multi-Skilling, a system of skills flexibility recognised globally but still fairly new in South Africa.

The current South Africa skills base is inadequate to meet global challenges and though change is becoming more so evident, existing education and training structures are doing little to ensure the higher degrees of skill flexibility required.

This study focuses on Multi-Skilling and contextualise Multi-Skilling within the Automotive Manufacturing environment specifically where it has recently been implemented.

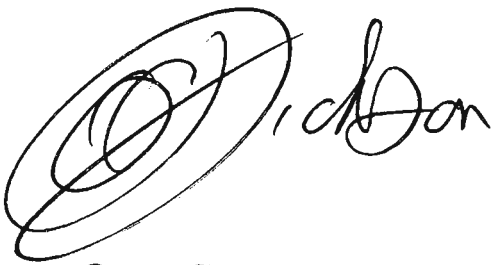
This study shows that for Multi-Skilling to succeed, education, training and development of the workforce needs to be prioritised to uplift large numbers of employees who had been previously disadvantaged and limited to low levels of skill.

Multi-Skilling will be shown to be of value and benefit to employer and employee alike as it offers opportunities for growth to particular sectors of employees, namely operatives who had previously been limited to routine and repetitive single focus tasks for years on end.

This study shows that when the approach to Multi-Skilling involves the intention to encourage career development, improved grades and rates of pay for lower level employees, namely operatives through recognition of acquired skills, it has potential to assist the motor manufacturing industry achieve the world class manufacturing status provided that flexibility, quality and productivity of manning is accepted by the workforce as well.

**Declaration**

**I declare that this dissertation is my own, original work, written under the supervision of Professors John Wallis / Astrid von Kotze. It is submitted for the Degree of Master of Adult Education at the University of Natal Durban. It has not been submitted before for any degree or examination in any other University.**

A handwritten signature in black ink, appearing to read 'Owen Cassell Dickson'. The signature is stylized, with a large, loopy initial 'O' and 'D'.

**Owen Cassell Dickson**

**1<sup>st</sup> day of May 2003**



## ACKNOWLEDGEMENTS

First and foremost, I would like to thank my wife Fiona Helen Dickson and children Cameron Cassell Dickson and Lara-Jane Cassell Dickson for their support and understanding during the many lost and quality family time that was replaced through my years of study.

Dr W.P Pienaar for your encouragement over the years.

Many thanks go to:

**Professor Astrid Von Kotze** who stepped in after the absence of Professor John Wallis who returned overseas. Thank you for the feedback, the encouragement, even though it meant changing chapter after chapter in order to make this dissertation more meaningful.

**“Men”**, for the encouragement, continued support, guidance and assistance. You were truly the key in the completion of this project. May God bless you and keep his watchful eye over you.

Rita van Antwerp, Estelle Schnettler, Cheryl Ndebele and Rehana (University of Natal) who over the time have played an instrumental role, each in their own way, assisting me with this project.

Lastly to those people whom I have not mentioned personally and who have offered assistance in a variety of ways - Thank You.

## CONTENTS

TITLE.....	i
ABSTRACT .....	ii; iii
DECLARATION .....	iv
ACKNOWLEDGEMENTS.....	v
CONTENTS.....	vi, vii, viii, ix, x
APPENDICES .....	xi
LIST OF FIGURES .....	xii
LIST OF ABBREVIATIONS.....	xiii

### CHAPTER ONE

#### THE DESIGN OF THE RESEARCH STUDY

1.1 INTRODUCTION .....	1
1.2 PURPOSE OF STUDY .....	3
1.3 ROTIONALE .....	3
1.4 CONLUSION.....	7

### CHAPTER TWO

#### A REVIEW OF THE LITRATURE

##### post-FORDISM IN WORK/EDUCATION AND TRAINING

2.1 INTRODUCTION.....	9
2.2 THREE POSSIBLE DIMENSIONS TO MULTI-SKILLING .....	13
2.3 A NEW PHILOSOPHY .....	14
2.4 SECURING ACCEPTANCE.....	14

2.5	STAGES AND CONCEPTS OF MULTI-SKILLING .....	15
2.6	CAREER PATHING.....	15
2.7	CHALLENGES .....	16
2.8	post-FORDISM IN EDUCATION AND TRAINING.....	18
2.9	THE FUTURE UNDER post-FORDISM .....	18
2.10	THE post-FORDISM CHARACTERISTIC .....	20
2.11	ARGUMENTS IN SUPPORT OF MULTI-SKILLING IN ACTION.....	20
2.12	CONCLUSION .....	22

### CHAPTER THREE

#### METHODOLOGY

3.1	INTRODUCTION.....	24
3.2	RESEARCH DESIGN.....	24
3.3	THE QUALITATIVE RESEARCH APPROACH .....	25
3.4	CHARACTERISTICS OF QUALITATIVE RESEARCH.....	26
3.5	CASE STUDY.....	27
3.6	DATA COLLECTION FOR THE CASE STUDY .....	28
3.7	JUSTIFICATION .....	28
3.8	THE QUESTIONNAIRE .....	29
3.9	INTERVIEW SCHEDULE (APPENDIX 3).....	29
3.10	SAMPLING.....	30
3.11	DATA ANALYSIS .....	31
3.12	RELIABILITY AND VALIDITY.....	31

3.13	INTERNAL VALIDITY .....	32
3.14	EXTERNAL VALIDITY .....	33
3.15	CONCLUSION .....	33

## CHAPTER FOUR

### IMPERATIVE CONDITIONS FOR THE MULTI-SKILLING PROGRAMME

4.1	INTRODUCTION .....	35
4.2	ADULT BASIC EDUCATION AND TRAINING (ABET) .....	35
4.3	CRITIQUE OF WORKPLACE ABET .....	37
4.4	THE NATIONAL QUALIFICATIONS FRAMEWORK (NQF).....	40
4.5	SUMMARY .....	43
4.6	SKILLS DEVELOPMENT ACT .....	44
4.7	THE SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA) ACT .....	45
4.8	COMMENT.....	46
4.9	CLAUSE 26 OF THE NATIONAL BARGAINING FORUM (NBF) SKILLS BASED GRADING TRAINING AND WORK ORGANISATION .....	47
4.10	SECURING COMMITMENT THROUGH NEGOTIATION AT THE NATIONAL BARGAINING FORUM.....	58
4.11	CONCLUSION .....	58

## CHAPTER FIVE

### THE CASE STUDY

5.1	INTRODUCTION .....	59
5.2	HISTORICAL BACKGROUND TO TOYOTA SA LTD.....	59

5.3	TOYOTA MOTOR CORPORATION (TMC) JAPAN .....	61
5.4	MAINTAINING FLEXIBILITY .....	64
5.5	STAFFING PLANS .....	65
5.6	PROMOTING A KAIZEN MIND .....	66
5.7	TEAMWORK.....	67
5.8	HUMAN RESOURCE DEVELOPMENT .....	68
5.9	ESTABLISHING A WORKING ENVIRONMENT THAT ENCOURAGES EMPLOYEES TO BE HIGHLY MOTIVATED .....	70
5.10	ESTABLISHING A STABLE WORKING ENVIRONMENT .....	70
5.11	INCREASING THE MMOTIVATION OF EMPLOYEES .....	71
5.12	NATIONAL STURCTURE AS PART OF THE CASE STUDY .....	79
5.13	THE EDUCATION COMPONENT .....	84
5.14	THE KNOWLEDGE COMPONENT .....	88
5.15	THE SKILLS COMPONENT .....	92
5.16	CREDITS PER IDENTIFIED MAIN STREAM .....	93
5.17	THE AUSTRAILIAN MODEL LAYOUT .....	94
5.18	THE SKILL CONSISTS OF TWO PARTS .....	97
5.19	RECOGNITION OF PRIOR LEARNING.....	101
5.20	THE COUPLING OF MULTI-SKILLING PROGRAMME TO WAGES .....	105
5.21	NEW EMPLOYEES APPOINTED .....	105
5.22	ROTATIONAL TRAINING .....	110
5.23	CONCLUSION .....	118

CHAPTER SIX

PRESENTING THE FINDINGS

6.1 INTRODUCTION..... 117

6.2 CONTEXT..... 117

6.3 THE TOYOTA SA MULTI-SKILLING INTERVIEW SCHEDULE (See appendix 3 for a copy of this interview schedule) ..... 120

6.4 ARE AMIC’S MORE FLEXIBLE?..... 138

6.5 RESPONSES TO THE INTRODUCTION OF MULTI-SKILLING AT TOYOTA SA..... 141

6.6 PERCEPTIONS OF OPERATIVES TO MULTI-SKILLING AT TOYOTA SA..... 141

6.7 CONCLUSION..... 149

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS..... 150

7.2 RECOMMENDATIONS..... 154

7.3 QUESTIONS FOR FUTURE RESEARCH..... 155

REFERENCES

INTERNAL REFERENCES (TOYOTA S.A) ..... 156; 157

EXTERNAL REFERENCES ..... 158; 159; 160; 161; 162

**APPENDICES**

**Appendix 1**

Clause 26 (National Bargaining Forum July1, 1993 – June 30, 1994)  
.....163-178

**Appendix 2**

Automobile Manufacturing Industry Questionnaire .....179-182

**Appendix 3**

Toyota S.A. Multi-Skilling Interview Schedules.  
The interview schedule as filled in by respondent from within  
Toyota SA Ltd .....183-187

**Appendix 4**

Automobile Manufacturing Industry  
Multi-Skilling Descriptive Guide ..... 188

## LIST OF FIGURES

Figure 1	The National Qualifications Framework.....	42
Figure 2	National Bargaining Forum Structure].....	74
Figure 3	A.M.I.E.T.B. Representation .....	77
Figure 4	National Framework.....	78
Figure 5	NBF .....	80
Figure 6	Toyota Multi-Skilling Framework .....	81
Figure 7	Component Structure .....	83
Figure 8	The Education Component.....	84
Figure 9	Credit Structure .....	85
Figure 10	Core Module.....	88
Figure 11	Core Modules (Level 2) .....	89
Figure 12	Core Modules (Level 3) .....	89
Figure 13	Core Modules (Level 4) .....	90
Figure 14	Multi-Skilling Programme .....	91
Figure 15	The Australian Model Layout .....	95
Figure 16	Main Stream Layout.....	96
Figure 17	Skill Layout.....	97
Figure 18	Certification Model .....	100
Figure 19	Multi-Skilling Programme credit values .....	102
Figure 20	Induction Programme Process.....	108
Figure 21	Rotational Training (Single Point Station).....	111
Figure 22	Rotational Training (Double Point Station) .....	113



## LIST OF ABBREVIATIONS

ABET	Adult Basic Education and Training
AMEO	Automobile Manufacturing Employee Organisation
AMIC	Automobile Manufacturing Industry Certificate
AMIETB	automobile Motor Industry Education Training Board
ANC	African National Congress
ASECA	A Secondary Education Curriculum for Adults
AWTC	Albert Wessels Training Centre
FETC	Further Education and Training Certificate
GETC	General Education and Training Certificate
HRD	Human Resource Development
ITB	Industry Training Board
NBF	National Bargaining Forum
NQF	National Qualifications Framework
NTB	National Training Board
NUMSA	National Union of Metal Workers of South Africa
OJT	On the Job Training
RPL	Recognition of Prior Learning
S.E.T.A.	Sector Education Training Authority
SAQA	South African Qualifications Authority
SAWU	South African Workers Union
TAC	Toyota Automotive Components
TMC	Toyota Motor Corporation
TSA	Toyota South Africa
TSD	Toyota Stamping Division

## **CHAPTER ONE**

### **THE DESIGN OF THE RESEARCH STUDY**

#### **1.1 INTRODUCTION**

Throughout the late 80's and early 90's increasing global competitiveness placed new imperatives on Toyota SA to maintain if not improve its productivity and status in the car manufacturing stakes.

With a training focus pitched at "on the job" single-task functions for lower level employees plus supervisory/management training for higher level employees the company found it was still not achieving the targeted levels of productivity it had set itself for survival.

At first glance the single most significant factor working against improved productivity was frequent production stoppages. On closer examination however it became apparent that the general low skill levels of operatives and/or their inability to apply themselves to tasks other than those they were specifically trained for, was indirectly impacting on production flow and therefore output.

Clearly improved productivity lay in finding ways to address these related issues and it was to the Training Department that the company turned for solutions.

As South Africa increasingly moves within the circle of international markets it is apparent that the general lack of skills in the country represents a major stumbling block for South Africa's ongoing growth and development. Global competitiveness brings with it the need for quality products and services at competitive rates. As Pierre-Noël Giraud explains "the ability of companies to compete internationally depends on their investments in productivity" (Gorz 1999:16). Where such products and services need advanced technology, it follows that design and operation requires vast skills and knowledge.

It will be argued in this study that by investing in the Multi-Skilling of employees at the operative level the automobile manufacturing industries in South Africa could go some way towards meeting competitive standards.

In addition, industry within South Africa is faced with ongoing demands for a workforce representative of the demographics of the country and for this workforce to advance to and overcome the challenges that were previously denied to workers given the Apartheid history.

Observations with industry have led to the view of Bird that “workers who have performed a job for many years have acquired the necessary skills to successfully execute it, but have been denied access to formal qualifications and certification due to racial policies” (Bird 1991:29).

Conversely, Machin proposes that the majority of workers within the formative industrial environment constitute “an abundance of unskilled workers earning minimum wages and performing menial tasks have been highly specialized and are characterized by low job satisfaction. These same workers are also likely to remain in the same position in the organization, without prospects for promotion for most of their working lives.” (Machin 1993:73).

It can be argued that within the automotive manufacturing industries in South Africa what Machin has described is in fact a true reflection of the day-to-day scenario of the production lines, whereby some employees have been doing the same job for 15 years to 20 years. This would surely constitute low job satisfaction.

I believe progression in an organization should be seen in terms of increasing rewarding work, a definite career pathing outline, movement within a recognized grading system, development of a positive work ethic which would lead to improvement in the quality of life of the employee at the operative level, and as a result, higher job satisfaction.

Such issues are closely related also to the concern of employers as the pressure becomes evident in attempts to align industries to World Class Manufacturing

Status. Mashingo points out that there is definitely, an “increased pressure to compete in or with international markets, regarding both quality and cost of goods produced” (Mashingo 1994: 19).

With an essential competitive drive by industry to survive, one method that would impart such a competitive edge within industry would be the key element of Multi-Skilling of their employees at the operative level. In line with this Multi-Skilling would be a way of organizing work so that people are able to acquire and use a greater range of skills. Therefore Multi-Skilling would entail the broadening of employee skills beyond the bounds of their current jobs (People Dynamic fact Sheet 223, 1996:21) and address issues of equality and parity as well as bring common standards to the industry as a whole. In so doing Multi-Skilling would allow portability of skills for certificated operatives who would be able to secure employment within any one of the many automotive industries located nationwide but also increase job satisfaction.

## **1.2 PURPOSE OF STUDY**

This study is a pilot investigation to assess the impact of design and implementation of Multi-Skilling at the operative level as an attempt to restructure employees activities in order to achieve optimal productivity and career pathing within the South African Automobile Manufacturing Industry. It further sets out to assess levels of success and/or failure of the Multi-Skilling programme with reference to the National Qualifications Framework and the agreed implementation principles. This will lead in the final analysis to an evaluation of the Multi-Skilling Programme implemented in its early stages at Toyota South Africa against certain set criteria.

## **1.3 RATIONALE**

Throughout its recent past Toyota SA line managers and production supervisors have faced frequent and ongoing pressure to maintain continuous production flow or subject the company to the reality of output being down and overall ratings within the industry affected. Customers cannot wait for delays in delivery of their vehicles.

Line stoppages due to absenteeism plus the plants inability to fill gaps left by personnel who had been trained for specific job functions only, meant that overall output was affected. In a “just-in-time” production system any line stoppage was not good. Frequent line stoppages as were being experienced in the plant, especially on Mondays and Fridays served only to affect Toyota SA’s overall performance in the world competitiveness stakes if not addressed timeously.

The challenge for the training department was enormous given the pressure the overall low skills levels of current operatives presented for the company.

The idea of a Multi-Skilling programme at Toyota SA emerged following a visit to Australia by senior HR executives from Toyota SA. They came back with ideas for greater flexibility of skills following observation of a successful, stable and flexible work context there that could arguably assist in bringing about improvements to productivity here. The idea was a plausible one.

It was argued that if operatives are trained for greater job flexibility and could apply themselves to different job line functions, then gaps left through absenteeism of the type described above could more easily be filled by available on-site staff than the current system allowed. Within the current system if a person is absent from one side of the line it was not easy to assign anyone else to the task as it was not his job function and/or he was not trained to do so. This was a symptom of the Fordist thinking on production that was dominant at the time. Pressure to minimise line stoppages and improve production efficiency fell back to the training department.

Ideas for “Multi-Skilling” were taken up by Toyota SA with the Motor Manufacturers National Bargaining Forum where they were studied and discussed by representatives of the industry’s unions and other motor manufacturers. The Multi-Skilling concept was formally adopted at this forum. Elements of the Australian model were adapted for local context and Toyota SA became one of the first to design and implement a more flexible skills base with a view to impacting on overall productivity.

By definition Multi-Skilling is a process by which employees are trained to perform a broader range of tasks than was formerly the case. It requires that traditional demarcations are set aside. The recent step towards Multi-Skilling in South Africa represents one of the most significant changes associated within the work place.

The inclusion of Abet as a starting point in the process of the Multi-Skilling process arises out of the fact that approx 45% of Toyota SA's workforce is illiterate or semi literate. Multi-Skilling, it will be argued can provide opportunity for upgrading educational standards to a point of effective and flexible skilling, allowing for onward and upward career pathing for individual employees as well.

Employees at operative levels of the Automobile Manufacturing Industry within South Africa have for years only enjoyed a one sided approach to their respective jobs, be it is as an operator on the production line or an assistant to the artisan within a designated trade.

This approach would be typical of the Fordist era where on the assembly lines the job comes to the worker, at a pace dictated by the employer. Piore and Sabel argue that, "The second industrial divide" locates the seeds of a post-Fordist future in the elements of craft production that have always co-existed alongside mass production industries (Mathews 1993:36). Further they argue that the key to a craftsman's skill lay not merely in the possession of a sequence of specialized procedures, but in the ability to take on a novel job and respond with an appropriate set of tools and techniques; it is the flexibility of response that is the secret of superiority of specialized craft production. O'Dwyer (1994:22) positions the theory of flexibility also where it is indicated that it is becoming increasingly clear that the changing content of jobs demands multiple skills or the acquisition of core skills.

The discourse of competitiveness is further discussed by Cutler where it is stated that workers need to be more enterprising making the most of the opportunities offered by new technologies. Cutler points out that people can no longer rely on

stable employment in one organization or area of work for their lifetime. They have to be prepared to move, change and develop. The transferability of skill and competence and core skills have entered the vocabulary of education and training and with that the competencies to actually transfer skills. Workers also have to be prepared to transfer from one job to another within the workplace. (Cutler 1992:16).

In the chapters that follow I will defend this post-Fordist statement in terms of the introduction of Multi-Skilling for operatives in the automotive industries within South Africa. I will show how a full multi-entry and multi-exit system as implemented at Toyota SA creates a career pathing for the manufacturing industry, where operatives are encouraged to undertake lifetime training thus gaining credits at each level within the Multi-Skilling programme for the education, core and skills components completed. I will show how this in turn provides the employee and the industry as a whole with the flexibility of skills and competitive capabilities required to maintain international market standards. It will be discussed in depth that in order to implement such a programme radical changes are required for unions and industrial human resource systems as well as for training and education systems.

Standard setting for the Multi-Skilling programme at Toyota SA started in 1995 after an Automobile Manufacturing Agreement was finalized between management and labour representative of all Automotive Manufacturers in SA. The programme was implemented at Toyota SA in 1995. It has been ongoing since this time. This study commenced in 2000, some 5 years after it was started. The programme is still running and all new employees post July 1995 are required to participate on the Multi-Skilling programme. Some 1200 employees have since achieved their Level 4 AMIC Certification as a result of participating on this Multi-Skilling programme.

My interest in this topic was sparked by the enthusiasm displayed by employees at the operative levels of Toyota SA for the Multi-Skilling programme. Such enthusiasm for the core elements of the Multi-Skilling programme was remarkable. High levels of enthusiasm were characterized by ever increasingly

large numbers of operatives presenting themselves for module examinations so much so that additional exam sessions had to be scheduled to cope with demand. This was unprecedented in the history of training at Toyota SA.

My specific interest in this research was that I wished to ascertain exactly what impact Multi-Skilling was having on output and what effect it was having on people. Given the considerable energy put into Multi-Skilling I wondered whether it is worth it or not for both the industry and for the individual employee.

At this point in time with Multi-Skilling at the operative level within the Automotive Manufacturing Industry in South Africa being largely an untested theory, I believe this study is worth doing, not only for the benefit of the Automotive Manufacturing Industries in providing feedback of impact but also for other manufacturing industries (such as “Nestle”) embarking on a similar Multi-Skilling programmes using the Toyota SA Multi-Skilling framework as a guide.

I believe this study will add value by providing useful information to the industry at large on both structure and design of Multi-Skilling and by showing the usefulness of a system of post - Fordist training able to meet the automotive manufacturing industries’ need to maintain competitive advantage.

## **1.4 CONCLUSION**

In the following chapters I will show how the Multi-Skilling programme is structured and operates, pointing the reader to the different forms of employee training taking place and how all three elements of education, core and skills components fit into the Multi-Skilling programme.

Thus Chapter Two, a review of the literature, outlines post – Fordism in work with insight on the delivery of education and training additionally describing Multi-Skilling under three dimensions. In Chapter Three, I outline the research methodology I chose for this study, that is a qualitative approach for the reason that there is a lack of awareness surrounding the benefits and rewards of the



Multi-Skilling implementation. In Chapter Four, the imperative conditions to the Multi-Skilling programme such as Adult Basic Education (ABET), its importance to the adult learner, its importance for the Companies who provide this training, will be fully discussed. I will further also describe the alignment of the Multi-Skilling programme of the manufacturing industries of South Africa to the National Qualifications framework (NQF), the skills development act, the South African Qualifications Authority Act (SAQA), as well as how/where the Multi-Skilling process at Toyota SA began in line with Clause 26 of the National Bargaining Forum (NBF) Commencing with negotiated agreements as had taken place between the Automobile Manufacturing Industries within South Africa and the National Union of Metal Workers of South Africa.

Then Chapter Five, the case study – this shows where and how I collected the research data from one of the automobile manufactures, namely Toyota South Africa, and how the Multi-Skilling Framework was designed, and negotiated with management and labour, and then discussing the implementation of the Multi-Skilling programme in reality. Chapter Six presents the findings of the case study that forms part of this study plus the results of relevant questionnaires utilized to support my contention of the relevance of the Multi-Skilling programme introduced into Toyota South Africa with bearing for both employer and employee. Finally Chapter Seven draws conclusions and makes recommendation for implementation of the Multi-Skilling programme firstly for Toyota South Africa and then for other manufacturing industries at large.

## **CHAPTER TWO**

### **A REVIEW OF THE LITERATURE**

#### **post-FORDISM IN WORK/EDUCATION AND TRAINING**

##### **2.1 INTRODUCTION**

Murray (1989) clearly describes the shift from Fordism to post-Fordism as the dominant organizing principle in the economy. Murray suggests that Fordism epitomized in the production lines introduced by Henry Ford - was the dominant principle of manufacture and distribution in the period from the late nineteenth century to the post-war boom years of the 1950's and 1960's.

With Fordism, one had standardized products manufactured by mass production plants with special purpose machinery. The classic image is of the production line with the products going past the workforce, each of whom undertook a task which was subject to the scientific management techniques of Taylorism. (Taylor 1988:81) Many of the modern manufacturing companies still model, job manufacture and work design, using the concept of the scientific management theory proposed by Taylor, (1988:81). The central concept of this theory is Multi-Skilled person. Taylor stated that a man works only for economic rewards and thus has no other needs that are relevant to his work. He prefers to avoid responsibilities and decisions about his work. Taylor also stated that the key to productivity was to minimize responsibilities and decisions, maximize the speed of production and pay the worker in relation to his output. Taylor designed worker activities on the basis of machines, and also analyzed production processes into sequences of specialised tasks assigned to the worker. Standardized products were consumed in the mass market, in which there was little scope for consumer choice unless you were wealthy enough to participate at the luxury end of the market.

Fordist organizations were governed by hierarchical bureaucracies, in which the planning was done by specialists and handed down to employees and consumers

alike. This was a result of, and led to, authoritarian relationships, pyramidal organization structures, centralized planning and exclusive job descriptions. We therefore have a picture of large bureaucratic, top-down organizations producing goods and services for the masses.

However, Murray suggests that Fordism is no longer the dominant set of principles governing the economy. He argues that an alternative stand has developed, made possible by advances in technology and particularly information technology. This has shifted the emphasis in the economy from manufacturing for a mass market to the provision of services. The principles governing this change result in and from post-Fordism.

Technological advances have increased the availability of information and the speed at which it can be corrected, analyzed and transmitted. This has enabled manufacturers to introduce "Just in Time" (JIT) systems. Early warning of increases in demand for certain goods and decreases for others can be used in the ordering of supplies.

However, new principles of post-Fordism are being introduced into manufacturing.

Most significantly, these principles involve flexible systems of manufacturing, customized design for specific segments of the market and the emphasis on quality control. The manufacturing plant in which all aspects of production are sustained under one roof is replaced by a new form of organization in which all non-essential work is sub-contracted to other organizations. Post-Fordism polarizes organizations. There is an increase in the number of smaller organizations who act as sub-contractors for a smaller core of large organizations. This is not presently the dominant mode in the South African automotive industry. Here, most factory floor operatives continue to work on automobiles in a mechanical way without recognition of their experience or input. With the projected introduction of Multi-Skilling, each employee will be given recognition for their level of skills, training and a certification programme will be instituted. There are experiences from elsewhere. We don't have much

experience here in South Africa, yet. That is why this study is useful and important.

The economic necessity for greater flexibility and innovation, demands new organization forms. These entail the breakdown of job demarcations and pyramidal bureaucracies. Multi-Skilled, flexible workers are seen as the key to these changes. Thus, as demands change workers are able to drop old tasks and take up new ones. To make this happen there is thus the need for continuous training, for the support and development of lifelong learners and the workplace to be actively constructed as a learning organization.

Given the above analysis, it is therefore unsurprising that these shifts in the economy must be supported at ideological and policy level by government. Government and labour organizations have emphasized the need for a more highly skilled and Multi-Skilled, flexible workforce. So, the transfer of skills as demands change is required in order to compete within the global economy. The introduction of a Multi-Skilling programme at the operative level in the automotive industry in South Africa will move the operatives from the nineteenth to the twenty-first century. Maintaining the current out-moded system is no longer a viable option. These changes will happen within the education and training arena.

Developing the argument further, O'Dwyer (1994:15) for example positions the theory of flexibility where it is indicated that,

“access to life long continuing training is the key point of education and training which have real impact on business competitiveness. It also constitutes a major factor contributing to greater flexibility in the labour market. Access to continuing training governs the continuing development of skills in a situation marked by changes in the working environment and significant changes in the work organization and production systems. The twenty first century will be based not so much on the exchange of goods as on production, transmission and

pooling of knowledge, access to theoretical and practical knowledge and investment in human resources. The transformation of skills and qualifications will be a central issue.”

Thus it is becoming increasingly clear that the changing content of jobs demands multiple skills or the acquisition of core skills. O'Dwyer states further that

“in the future, autonomy and capacity for innovation, the ability to work in groups or in networks, a concern for quality, analytical and decision making skills as well as the capacity to learn how to learn and pass on this knowledge will be just as important as technological skills and general knowledge.”  
(O'Dwyer 1994:22).

For the successful implementation of Multi-Skilling the above becomes relevant for it is in the small steps taken towards greater flexibility not only in job content but also in overall mind shifts of employer and employee alike that we are starting to see this new philosophy taking shape.

The discourse on competitiveness is further discussed by Cutler where it is stated that workers need to be more enterprising making the most of the opportunities offered by new technologies. Cutler points out that people can no longer rely on stable employment in one organisation or area of work for their lifetime. They have to be prepared to move, change and develop. The transferability of skills, competence and core skills have entered the vocabulary of education and training and with that the competencies to actually transfer skills. Workers also have to be prepared to transfer from one job to another within the workplace. (Cutler 1992:16)

Multi-Skilling as an approach to education and training can be viewed as a better way of preparing the worker for a new era of industrial life.

I wish to now show that Multi-Skilling is not just one directional but that it can be structured to address various needs at the same time depending on the context in which it would be used.

## **2.2 THREE POSSIBLE DIMENSIONS TO MULTI-SKILLING**

### **2.2.1 Horizontal Multi-Skilling**

Horizontal Multi-Skilling provides an employee with diverse skills at a similar level of complexity. This is not merely the performance of a wider range of tasks, but also the extension of the employee's skills base. For example, an employee who has acquired the skill to operate a haul truck in an open pit mine may then learn to operate the front end loader that loads the rock onto the haul truck.

### **2.2.2 Cross-Skilling**

Cross-Skilling is similar to horizontal Multi-Skilling, in the sense that it provides skills at a similar level of complexity. However, these skills are extended beyond the boundaries of traditional occupations or trades. For example, an employee who has acquired the skill to operate the front end loader may then learn to lubricate it or undertake some basic maintenance tasks.

### **2.2.3 Vertical Multi-Skilling**

Vertical Multi-Skilling provides an employee with additional skills at a higher level of complexity. For example, the employee who can operate a front end loader and lubricate it, then learns to train others to do these tasks. Vertical Multi-Skilling would give the employee an in depth understanding of a work area, accompanied by greater interest and satisfaction, while the organisation gains an increase in its pool of expertise.

There is no doubt that these three descriptive views of Multi-Skilling have an incisive link within Industry, that is, various departments within industry are positioned to follow a route of Multi-Skilling that will best suit their operations.

## **2.3 A NEW PHILOSOPHY**

When the above happens a new philosophy emerges in which

- People are a vital and competitive resource in the business.
- Opportunities are provided to all.
- Pay back is indirect and longer term.
- Formal recognition and rewards are intrinsic for everyone.
- Maximum benefit is derived if you re-organize work.
- Multi-Skilling leads to higher and more complex levels of doing and understanding.

The restructuring of training within a Multi-Skilling framework could have a positive effect on many spheres of need in the country. However what is important is the intense negotiation that will be required between both business and labour for it to be successful.

## **2.4 SECURING ACCEPTANCE**

By including the various stakeholders in discussions on Multi-Skilling, the inter-relatedness of the Multi-Skilling programme would then be accepted by all concerned.

The importance of the organization really accepting and thus believing in the philosophy of Multi-Skilling is important in order to sustain the development and the implementation phases of this programme. It must be accepted that the programme is a longer term investment, and where necessary change within the organization must be accepted in order to ensure a maximum benefit of the Multi-Skilling programme, via one of the routes of the three dimensions mentioned previously. From the consideration of these dimensions mentioned it is imperative to design a framework that would form the basis of the Multi-Skilling effort which will thus determine the spirit and character of this process.

Individuals that would embark on the Multi-Skilling programme must be allowed to progress as far as their potential permits them to go.

With the exit of skilled people from South Africa to other overseas countries, to address these skills shortages, Multi-Skilling could well be one answer for a short term fix.

## **2.5 STAGES AND CONCEPTS OF MULTI-SKILLING**

First will be the completion of various skill, education and knowledge modules whereby recognition and rewards (incentives) are received upon successful completion of each level. Skills, education and knowledge levels would become progressively more complex as the employee progresses further up the levels. An essential element of this process would be for a skills assessment to be carried out, assessing the type and level of complexity of the various skills and their relevance to the actual work performed. Once the various skills have been identified and clearly grouped, values can then be attached, based on their content.

Skills and knowledge modules which require a higher education level will be found at the upper levels. An assessment of competency and the recording of individual results will be essential to ensure effective rewards. Maintaining a balance between on line skills training and off line skills training would be an added challenge.

The information in this study could provide a basis for a wider reaching study of a more quantitative nature. In such a study, sampling could be undertaken on a much longer scale as the knowledge of and exposure to a Multi-Skilling programme is on the increase, it is probable that the process of finding sufficient respondents with knowledge and training in Multi-Skilling, could become easier.

## **2.6 CAREER PATHING**

With the Multi-Skilling programme in place, a clear career pathing will be determined within the Multi-Skilling process for employees. Multi-Skilling would appear to be a more effective way to then integrate employee



expectations. The ultimate product of such a process should be able to make a far more valuable contribution to the employee's working environment than was previously the case.

The challenges for management and supervision however, will be to make use of the staged skills training programme in order to enhance the productivity of the organization. Employees will be certificated at each level and individuals skills will be recorded per person, which in turn will allow a skills inventory to be created per department.

## **2.7 CHALLENGES**

However certain pitfalls may be encountered at various stages of the Multi-Skilling programme. Some may even re-appear from time to time as co-ordinators face different challenges. Line management and supervisors must ensure that continuous checks and balances are in place to avoid major problems. It is important that an agreed-upon conceptual framework becomes the basis for future successes.

In summary, Multi-Skilling breaks the paradigm on how and why to develop people, and requires an intensive diagnostic approach to determine skills and knowledge elements within the actual work environment. For control purposes, the Multi-Skilling programme must be supported by an effective and user-friendly administrative system, by providing formal recognition, reward for levels of achievement and employee motivation. With positive influence a work ethic will be established and maintained. The time then spent on this programme will not be deemed wasted and short term successes will be mainly in the area of conceptual planning and consensus building.

The involvement of both Management and the Unions is an important milestone in creating an understanding of the holistic process, and the requirements for the successful implementation of this Multi-Skilling process.

In general I acknowledge that the Multi-Skilling programme would therefore require a positive attitude and approach by Management, Line Supervision and Labour, as this is a new direction in the development of the work force.

A clear understanding will be required of the process and its prerequisites, one of which is the amount of time spent on development by each employee. Employers and labour have very different frames of reference when viewing the economy, and industry in particular. However, it is important to emphasize the mutual concern for the growth of the economy through successful production and competition. It may be assumed that positive developments in the economy would go some way to improving the standard of living of the majority of South Africans. Education, training in general, and literacy in particular, are widely associated with improving the lives of individuals by serving as a tool for empowerment; where knowledge and skills are being focussed on social transformation, and also by equipping individuals to function in and serve the changing demands of society (Lyster, 1992:52).

Saunders further intimated that “An individual is believed to be competent when they possess the knowledge, skills and attributes necessary to support performance excellence in a particular job” (Saunders 1997:3). This is compatible with the Multi-Skilling process.

“However, reform in the educational sphere alone would remain unskilled. This would result in a negative impact on the economy, as well as failing to deal with the issues of social justice and redressing past imbalances.” (Bird et al, 1994: 87).

In terms then of the Multi-Skilling route, it is claimed that prior learning would be assessed (via appropriate means) and relevant learning will be recognized. Consequently this would then address the concern stated by Bird (1991:29), where workers who have performed a job for many years have acquired the necessary skills to successfully execute it, but have been denied access to formal qualifications and certification due to racial policies.

## **2.8 post-FORDISM IN EDUCATION AND TRAINING**

It can be seen that certain changes in education and training must promote the development of post-Fordism in the economy, particularly the increased role for employers and their support for open learning. This suggests a picture of education and training being harnessed in order to better support economic development. The human capital model is at the root of education and training policies of the major industrialized countries. An increased skill base of the workforce or potential workforce is seen as the answer to economic competitiveness, which will lead to economic growth. The question can then be asked, “Is the only role of education to provide workers to boost the economy”? Samson and Vally (1996) have answered the above posed question, by saying that human capital theory is grounded on the understanding that a direct link between education and economic growth exists. It is assumed that improved technical skills and technology will impact positively on productivity and hence the economy. Education becomes significant as a national investment (Samson and Vally 1996).

The development of open learning opportunities has been associated in educational circles with increasing access, by making education and training more flexible and responsive to student needs. It is argued that open learning has become popular among employers because it allows employees to train in their own time without having to be released from work. Therefore from an industry viewpoint, this would appear to be a more cost effective form of training.

If open learning is accepted as the direction to be pursued in education and training, the logical conclusion of this analysis is that the sooner post – Fordist principles are embedded in the organisation of the delivery of learning, the quicker the goals will be achieved.

## **2.9 THE FUTURE UNDER post-FORDISM**

Over the next twenty years this country will experience profound economic and social changes, largely as a result of the increasingly rapid spread of existing and

new technologies. This could lead to unprecedented shifts in economic activity, and to marked changes in the patterns of work and leisure (or non-work), with less working time needed for much more highly skilled work. Quality will have to replace quantity. Adaptability will become essential. The present scale of these changes is small compared with the future effects of the accelerating speed to change which will reach in the next few years into many more sectors of the economy to affect larger sections of the population. The idea of holding the same job for life is becoming increasingly untenable. Those with the greatest capacity to adapt will survive successfully, those least adaptable, nations as well as persons, will fail. (Advisory Council for Adult and Continuing Education. 1982:181)

Workers need to develop a "broader occupational competence concerned with adaptability, management of roles, responsibility for standards, creativity and flexibility." (Natal Institute of Adult Continuing Education. NIACE 1990:2)

However, André Gorz (1989) argues that, unless there are substantial changes in the ideology, organization and distribution of work, current trends will result in a social formation very different from that suggested by modernisers of the economy through Multi-Skilling. The post-Fordist future will produce a particular segmentation of the active population:

- 25% will be skilled workers with permanent jobs in large firms protected by collective wage agreements;
- 25% will be peripheral workers with insecure, unskilled and badly paid jobs, whose work schedules vary according to the wishes of their employers, and the fluctuations of the market;
- 50% will be semi-unemployed, or marginalized workers, doing occasional or seasonal work or odd jobs (Gorz 1989:225)

In other words, the flexibility and skills needed among the work force will vary hugely on the basis of the differential positions we occupy in the post-Fordist

economy. Gorz claims that the highly educated, Multi-Skilled flexible employees of the future will be the minority experience.

Gorz, then, highlights the importance of the need for substantial change within Industry. In this text Gorz proposes that, through the distribution of work through Multi-Skilling, Multi-Skilled and flexible employees of the future will be in the minority, and the quantity level of production will be replaced by the Multi-Skilling teams to focus on quality, which will be the demand from re-global competition.

## **2.10 THE post-FORDISM CHARACTERISTIC**

post-Fordism is characterised by a move away from the rigidity and standardisation of mass production in Fordism (Giddens, 1989, Kraak, 1991). Instead the emphasis is on smaller production units, relying on a Multi-Skilled, flexible and problem-solving workforce (Marcum, 1982, Kraak, 1991, Samson and Vally, 1996). Such a workforce is able to adapt existing skills to new situations and is able to learn new skills to keep up with the fast pace of change in the business environment. The need for a more flexible workforce and demands for high quality goods result in a strong link between the human capital theory of investment in people and training and the post-Fordist approach to production. As the need for more skills and a Multi-Skilled workforce increases, the motivation to increase spending in the training arena is strengthened. post-Fordism sees investment in education as justifiable if it results in increased productivity, improved quality and economic performance (Samson and Vally, 1996).

## **2.11 ARGUMENTS IN SUPPORT OF MULTI-SKILLING IN ACTION**

**2.11.1** Ralcorp and BHP Cooper (Dalton, 1998) have been able to achieve what other managers only dream about: a flexible workforce that delivers flexible advantage. On a daily basis, they see first hand that employees who assume broader responsibilities are better- equipped to solve problems, make effective

decisions and increase their overall productivity. Through cross-training and Multi-Skilling, the employees in a flexible workforce have the array of skills needed to perform multiple tasks in a companies production of customer-service process. By contrast, employees in a traditional workforce do a single, narrow job in a work system that requires each worker to be responsible for only a small part of the process.

**2.11.2** Creating a Multi-Skilled workforce is not an easy step, but it can bring a new shop floor culture as well as drastically improving the bottom line. In 1992, Pirelli's factory in Carlisle began a new wage structure grounded in Multi-Skilling. Pay began to be linked to competencies based on assessed skills and depth of knowledge – making a direct link between gaining new skills and getting wages. It is important to maintain momentum and enthusiasm by ensuring that Multi-Skilling and empowerment are integral parts of the continuous improvement process. (Hague, 1997:28)

**2.11.3** The results of the latest Skill Needs in Britain survey are that one in 5 vacancies in the past year proved hard to fill. This is an increase of 50% in a year, from 14% in the year May 1993 to June 1994. The wording “proving hard to fill” is the approximation used in the survey for skills shortages. The proportion of employers affected by recruitment problems is identical to the percentage of vacancies in the economy labeled by employers as hard to fill. One of the main factors influencing this appears to be exposure to the labour market. Another is that employers skill needs were mainly computerization and automation and changes in work practices or Multi-Skilling. The survey provides an insight into some of the ways that employers are attempting to guarantee a supply of appropriate skills and other competencies. Three quarters for example, now make use of links with outside agencies or other organisations (Industrial Relations Review & Report 1994: 12-14).

**2.11.4** Skills-based pay is rarely a reward objective in itself, but is rather introduced as a means of achieving broader organizational change, most notably in working arrangements. One common element of employer practice identified by an in – depth survey of skills and reward is the use of skills – based pay to foster moves

to Multi-Skilling. An examination is conducted of the reward practices of 2 organizations – Bayer Diagnostics and Portsmouth Water – which have sought to link skills and pay in this way, and which are now both attempting to build National Vocational Qualifications in to their arrangements. (Employment Review , 1996 : 5-8)

**2.11.5** In January 1994, the operational effectiveness of the Customers Services Department at Nationwide Building Society Bank was assured, but the new executive manager recognised that improvement was both desirable and achievable. To reach this goal, certain aims were set which formed the latter part of the whole change management process – they included Multi-Skilling. The Multi-Skilled workforce has been achieved through a program of “job swapping” on a regular basis. All levels of management actively participate by moving between teams and areas. The benefits of Multi-Skilling may have been clearly identified, but there needs to be a continuous awareness of activities which impact upon both the concept and the reality (Hale 1996: 8-9).

**2.11.6** Since the 1980s, work organization reforms have been driven by employers, pursuit of higher productivity and competitiveness. The resulting teamwork, Multi-Skilling, enhance flexibility, and direct participation can satisfy workers aspirations to more fulfilling jobs, but pose a challenge to trade unions. Such reforms create – and are often introduced through–channels of labour – management interaction that bypass collective bargaining and formal consultative machinery. Examining and comparing experiences in different countries and enterprises, it is argued that, unless unions can gain a greater role in decision making on the content of work, they risk losing members to management – controlled participation schemes (Ozaki 1996: 37-58).

## **2.12 CONCLUSION**

These examples signal progressive change and the implementation of these changes focusing on the increasing of flexibility among the workforce and the employers. The contemporary dominant discourse of competitiveness posits increased flexibility as a desirable, even inevitable, direction for the economy to

which policy should be directed. Global competition, technological advances and demographic shifts enforce changes on the economy which, in turn, creates the need for flexible, Multi-Skilled workers able and willing to become life-long learners. To be competitive, companies, as seen in the examples above, have to respond swiftly. Workers must be prepared to change too, within the same company or to another.

Glyn summarises thus “ Those with the most skills and qualifications will witness an expansion of opportunity, whilst those with the fewest will experience a contraction of employment” (Glyn 1996: 24)



## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

As the area of Multi-Skilling is not well documented in South Africa this exploratory research is aimed at finding out more about its structure and whether there have been benefits to both the employer and employees within the Automobile Manufacturing Industry.

My interest in finding out more about the benefits of this programme was sparked by comments received from my co-workers at Toyota SA. They spoke of the positive effects it had for them both at work and in their personal lives. This is now born out in this research with comments made by Respondent 1 for example who said the “core modules gave me some valuable knowledge of how our company operates” and Respondent 2 who said that the programme acted “as a bridge towards success or better position since most of us were disadvantaged” and many more such positive views.

This research thus aims to capture the full range of attitudes and views about Multi-Skilling as expressed by those directly involved in the process and I believe this information could form a useful basis of continuing research into this aspect of automotive manufacturing training and development.

#### **3.2 RESEARCH DESIGN**

As discussed earlier, Multi-Skilling is in its infancy phase in South Africa. As such it is best I believe to conduct an investigation into the subject by gathering information (attitudes, views and perceptions) from those who directly experience its effects. To a degree the data in this study is therefore subjective as respondents have provided data purely from their experience of the programme.

Mouton and Marais (1990: 32) explain that the aim in research design is “to align the pursuit of a research goal with the practical considerations and limitations of the project.” This research design focuses upon the Automotive Manufacturing Industry Environment and it is hoped that the study will enlighten smaller and medium manufacturers within the Automobile Manufacturing Industries of South Africa about how to structure and implement a Multi-Skilling programme so that it will be of benefit to both the employer and their employees. As this study is intended to be read at factory level I have chosen deliberately to word it in terms that will be easily understood by non-academics.

### 3.3 A QUALITATIVE RESEARCH APPROACH

As a result of a relative lack of awareness around the specific details, benefits and rewards of how Multi-Skilling can benefit the industry within South Africa, a qualitative research approach was considered to be the most appropriate tool for gathering information, of finding out and uncovering what people actually think about the programme.

A qualitative research approach is preferable as it is naturalistic in attempting to *uncover* and *understand* phenomena about which little is known (van Maanen et al, 1982: 53). Further support for this approach is provided by van Maanen when he states that “qualitative research aims to *disclose* and *reveal*, and not merely to order and predict. The issue of commonality and things shared in the social world appears to be of more importance than differentiation and things not shared” (van Maanen 1983: 27). With this approach the researcher is further required to “*interpret*” the “real” world from the perspective of the subjects of the investigation.

As the concept of Multi-Skilling in totality is not yet fully experienced in South Africa, a qualitative approach would help uncover for the first time in South Africa crucial data about the attitudes, experiences and views of those directly involved in its implementation. It will also allow for the emergence of new insights and perceptions from relevant frameworks, namely the Toyota Multi-

Skilling Framework (Fig 6) and provide useful insight into points of consideration for further research.

The combination of exploratory and descriptive research aims of this study reinforce the use of a qualitative approach. (Hakim 1987; Bless and Achola, 1988)

I will now highlight the main characteristics of qualitative research from the relevant literature to show why I believe it is the most appropriate form of research to examine the Multi-Skilling process within the Automobile Manufacturing Industries in South Africa.

### **3.4 CHARACTERISTICS OF QUALITATIVE RESEARCH**

Maykut and Warehouse (1994:24) characterise qualitative research as having:

- An exploratory and descriptive focus: it is important to indicate that qualitative research is guided by a general focus of inquiry, rather than directing and narrowing the research at the outset. This allows for new and unsought data to surface within the study.
- Emergent design: has a close link with the above characteristic. Qualitative research allows for change to research design to emerge as features arise which are not originally considered.
- Purposive sample: the participants are carefully selected for the study, and the sample is based on selected participants who would be best positioned to expand on the variability of the sample. The sample selected for this study is done so on the basis of their “first-hand” experience of the Multi-Skilling programme within an Automobile Industrial environment where it was felt such information would make a significant contribution to this study.
- Data collection in the natural setting: the context is important in terms of further understanding respondents' contributions. In this study, I was in the position to collect data on the premises of one of the Automobile Manufacturing Industry, Toyota SA. Being based at the plant allowed me

direct access to a cross section of employees who felt they could freely express such views in confidence.

- Emphasis on “human-as instrument” (Maykut and Morehouse (1994): in the qualitative research approach, the researcher’s responsibility does not only concern the gathering of information. The researcher also has to extract meaning from the relevant information presented by respondents. Because the researcher’s role in the interview process brings in a crucial element, all data should be reviewed with the understanding that it is subject to selection and interpretation on the part of the researcher.
- Active participation: qualitative research characteristically allows for observation of respondents, their actions, and their behaviour. In this study of the Multi-Skilling process I was fortunate to experience the respondents actions and behaviour within the respondents own surroundings and the respondents answered the questions in their individuals styles.
- Inductive data collection and analysis: some open ended questions allowed for freedom of expression of respondents, their thoughts and their opinions, within this study.

### **3.5 CASE STUDY**

A case study approach to reporting research outcomes and results of qualitative research is often best presented in a “rich narrative, referred to as a case study. The actual responses from the selected respondents are provided to give the reader a more in depth insight into the contributions provided by the respondents.” (Maykut and Morehouse, 1994: 47).

This approach allows us to draw information from a real life situation, extract the essential elements and learnings which pertains to what we wish to know more about, and allows a more in depth understanding of that particular field.

### **3.6 DATA COLLECTION FOR THE CASE STUDY**

This study commenced in February 2000 with design of research and me identifying the most appropriate areas for data collection. Data collection was undertaken via structured questionnaires for the wider Automobile manufacturers, interview schedules for those employed at the operative level within Toyota SA itself, line managers and supervisors and a literature study.

I decided on area by area interview schedules within Toyota SA (described fully later) to cover operatives as well as their supervisors, line managers and shop stewards in the Paint Shop, Body Shop, Assembly, Components, Stamping Division.. I included supervisors and line managers in this study so that I could find out and substantiate perceptions and views gathered from the operative levels as I thought this would be useful as supervisors are in a position to directly observe the benefits or not of Multi-Skilling and I was interested in securing their views as well.

The combination above allowed me to gather data from the wider industry about participation in Multi-Skilling and the views of a diverse range of the workforce at Toyota SA who had participated in its Multi-Skilling programme. These together would provide useful first hand data about levels of success or failure of the programme which was the critical question set by this research.

### **3.7 JUSTIFICATION**

Why is this the best way of collecting data for this critical question.

The interviews and questionnaire will provide the most direct evidence by way of perceptions of the success or failure of the Multi-Skilling Programme in the Automobile Manufacturing Industry of the current role players by providing information relating to their actual experience of it, views and attitudes.

The Literature Study will provide a broad evaluation framework to test the South African Multi-Skilling programme/process nationally.

### **3.8 THE QUESTIONNAIRE**

An in-depth study of the seven Automobile Manufacturers in South Africa was seen based initially on a questionnaire which was used as a data collection tool.(APPENDIX 2). These questions were devised with the aim of finding out if all the Automobile Manufacturers within South Africa would follow a set plan - that is either to formulate a standard Multi-Skilling framework that would collectively be accepted or if the Automobile Manufacturers would formulate their own respective Multi-Skilling framework that best suits their individual needs but which utilises guidelines drafted through the National framework.

As all respondents are located within South Africa but at different points around the country, I initiated personal contact with the Training Manager of each of the Seven Automobile Manufactures. I explained the purpose of the study then asked them to answer all questions that were posed, not omitting any single question and to answer as fully as possible. The main focus was to identify with the selected Automotive Manufacturer, the “leader” of the Multi-Skilling programme, as determined by the Automobile Manufacturing Education Training Board (AMIETB).

### **3.9 INTERVIEW SCHEDULE (APPENDIX 3)**

An interview schedule was developed for operatives within the “leading” Automobile Manufacturer Toyota South Africa.

Of the 125 respondents who were interviewed, 21 respondents fell within the following categories:

- seven line managers selected on the basis of area coverage of those sections where Multi-Skilling would be most prominent.
- seven shop floor supervisors selected on the basis of area coverage as above.
- seven shop stewards selected on the basis of their responsibilities to the areas above,

and 104 were operatives selected randomly from within the following divisions: Paint shop, Body Shop 1, Body Shop 2, Manufacturing Operations, MLD.

Questions in the interview schedule were devised to accommodate those work areas that effectively had Level One to Level Four employees who were active participants in the Multi-Skilling programme, to see what impact the Multi-Skilling programme would have within these work areas.

I set up appointments with each of the 104 operatives. I met them individually on the shop floor “green area” and spent an average of 30 minutes with each respondent. I explained the purpose of the study, that I was undertaking it as part of my own study programme but also, that it was an opportunity for them to speak openly about the programme, to air their views, both positive and negative. In these situations respondents were provided also with an opportunity to make additional comments and to answer questions in a completely non-restricted fashion. Thus, while the interview schedule has focused on the most relevant areas, it did allow for new and unpredicted areas of interest to be recorded. This form of questioning drew on some of the benefits of unstructured interviewing by allowing respondents opportunity to express full views.

The same interview schedule was used with management and line supervisors at Toyota SA allowing them too, an opportunity to provide views on the effects of Multi-Skilling and receive feedback from employees in their respective areas of work once the study was finally completed.

### **3.10 SAMPLING**

Selective sampling was used among individuals from within the Automotive Manufacturing Industries of,

- Toyota SA
- BMW SA
- Delta SA
- Nissan Auto-Makers SA

- Volkswagen SA
- Daimler-Chrysler SA
- Samcor SA

Additionally, the Industry Training Board namely the Automobile Industry Education and Training board (AMIETB), to whom the seven Automobile Manufacturers are affiliated, was purposively selected to participate within the sampling framework. The key person providing information from the above manufacturers were the Training & Development Managers as they were the link to the Multi-Skilling programme in their manufacturing environment.

### **3.11 DATA ANALYSIS**

Data analysis is intended to organise the information so that it becomes manageable. The analysis of qualitative data “is a process of making sense, of finding and making a structure in the data and giving this meaning and significance for ourselves, and any relevant audiences” (Jones, 1994:72).

I hoped to investigate both the impact of the programme plus perceived levels of success or failure of the Multi-Skilling programme with the Automobile manufacturing industry in South Africa via an analysis of the data secured. This together with the literature survey will be structured into a format that is intended for wider readership amongst members of the Automobile Manufacturers as well as other industries with expressed interest.

### **3.12 RELIABILITY AND VALIDITY**

The quantitative view of reliability is inapplicable in qualitative data collection because:

“Certain kinds of reliability must be intentionally violated in order to gain a depth of understanding about the situation, (ie. The observers behaviour must change from subject to subject, unique questions must be asked of different subjects.....there is an inherent conflict between validity and reliability - the former is what field work is specially qualified to gain, and increased emphasis



on reliability will only undermine that unique function). (Sieber 1976 in Miles, 1983 :126).

This does not imply that every effort to improve reliability should not be made in a qualitative study. In order to positively affect reliability research should be “rigorous, systematic and transparent” (Walker, 1994: 191).

Reliability is a dependable measure.

(Wolcott, 1994 : 348) expresses below, that validity in qualitative research requires certain procedures that must be followed:

These are:

- accurate recording
- the inclusion of primary data in the final account, i.e. let readers see for themselves the raw data.
- Full reporting
- Candidness, in other words, it must be clear.
- Accurate writing

Validity is a true measure with dependable and consistent results.

### **3.13 INTERNAL VALIDITY**

Wolcott (1990:72) claims that internal validity is the degree to which the interpretations and concepts have mutual meanings between the participants and researcher. In my study I took steps to ensure that responses were closely representative of the true feelings and opinions of the respondents. I did this by preceding each interview with a short introduction regarding the purpose of the exercise and why people should provide their fullest views, both positive and negative. I went further by explaining that in doing so they would be contributing to meaningful improvements that can be made to the programme that would benefit both the company and themselves.

Furthermore I preceded all 125 interviews by explaining my own position at Toyota, that I was the Technical Training Manager with no direct responsibility

for their individual work performance (this was the responsibility of individual line managers) but instead from the department with overall responsibility for the implementation of the Multi-skilling programme. This I believe was important for respondents to understand so that as a manager conducting interviews I did not stand in the way of true expression of views and feelings of how the programme impacted on their personal and work lives. My role then was to record their views verbatim

This form of data gathering, whilst methodologically acceptable, was found to have its own set of problems. Misinterpretation of certain questions by respondents, avoiding certain questions or simply supplying only brief outlines rather than detailed input in certain areas are examples of this. I am now aware of valuable lessons in the selecting of respondents, further, instructing them in procedure and formulating constructive questions that have been learnt in this research. Further from the scheduled interviews with employees, they were asked to comment on the Multi-Skilling Programme.

### **3.14 EXTERNAL VALIDITY**

Qualitative researchers for example define external validity differently. Most qualitative studies use a case study design in which the single case is not treated as a probability sample of the larger universe. In other words, the researcher does not aim at generalization of results but the extension of the understandings, detailed descriptions that enable others to understand similar situations and extend these understandings in subsequent research. Thus this research piece will serve to enhance understanding of Multi-Skilling by the Automobile and other interested industries – not only in terms of structure and design but also the extent to which it has had some impact.

### **3.15 CONCLUSION**

In discussion with members of industry, it was made clear, that for Multi-Skilling within the automobile manufacturing industry in South Africa, links that would be imperative to ensure added success for the Multi-Skilling programme would be identified and pathed. In the process of research I've concluded that

Multi-Skilling cannot be understood in isolation from these. The essential links that were identified are:

1. Adult Basic Education and Training (ABET) with reference to the General Education and Certificate (GETC) and the Further Education and Training Certificate (FETC)
2. The National Qualification Framework (NQF)
3. The Skills Development Act
4. The South African Qualifications Authority Act (SAQA)
5. Clause 26 of the National Bargaining Forum (NBF)

In the following chapter I will describe these linkages and explain their significance to Multi-Skilling. At the time of this research being conducted, other industries have since evaluated the Multi-Skilling programme with Toyota South Africa, and subsequently are positioning themselves to embark onto this Multi-Skilling route. This will serve as a further starting point for more in-depth studies throughout other industry. In this sense it serves as a valuable pilot study for further investigation.

## **CHAPTER FOUR**

### **IMPERATIVE CONDITIONS FOR THE MULTI-SKILLING PROGRAMME**

#### **4.1 INTRODUCTION**

The operating skills training and development environment for Automobile Manufacturers in South Africa is governed by National Educational Policy (which ensures standard setting and provides guidelines in respect of competencies per level of training), Labour Legislation requirements, and provisions for training and development made by the National Bargaining Forum of the Automobile Manufacturers (which guides overall training & development policy).

The Multi-Skilling programme is therefore necessarily linked to addressing all three imperatives, all of which have proved to be vitally important in ensuring that a Multi-Skilling programme would be in line with national industry and worker specific interests and objectives.

This chapter thus sets out the conditions necessary for the successful implementation of a Multi-Skilling programme. It shows how each imperative link plays a critical role in ensuring overall that the Multi-Skilling programme meets its objectives but commences also from a sound foundation of commitment and support, at the same time meeting national quality standards in effecting desired changes for greater efficiency and improved output within the motor manufacturing industry.

#### **4.2 ADULT BASIC EDUCATION AND TRAINING (ABET)**

In terms of employee development, the first link in the chain to Multi-Skilling is Adult Basic Education and Training (ABET). This is vital to both employee and employer.

For the employer ABET serves as the first step to the further and on-going training and development of those employees who were not fortunate enough to have attended a formal school. This means that these employees would not normally be able to benefit from further and on going skills development and training offered by the industry as part of its Human Resources objectives of contributing to raising quality and improving efficiency.

For many employees lack of formal schooling has created a hurdle for those employees hoping to improve and develop their career and earning opportunities. ABET for such employees is a necessary first step in their Multi-Skilling process since a large proportion of the workforce is either illiterate or semi literate and therefore do not demonstrate the core competencies required for participation in any further education and training courses on offer.

ABET classes provided by the employer to such employees will provide disadvantaged employees with tangible benefits in the form of basic literacy and numeracy skills on which they can build further education and training.

The implementation of ABET is identified as a priority need for this country. Statistics indicate illiteracy rates of as high as 50% in some areas in South Africa. International comparisons refer to the impact that high rates of literacy have on development and growth of a country and its economy and it could be argued that South Africa cannot hope to achieve its growth goals until its literacy levels begin to approach the high rates of more developed countries (Lyster, 1992:69)

**The embedded importance of ABET in relation to skills training are:**

- to redress educational inequalities and enable access to further study.
- to help redress economic inequalities.
- to help sustain economic development.

In relation to the Multi-Skilling programme within the Automobile manufacturing industry employees now have the opportunity to access free

education that address past imbalances of personal development. The Multi-Skilling programme as has been shown consists of three main pillars: education, core and skills training of which ABET forms a key education component. This pillar of ABET will further be discussed in Chapter 5.

**The importance for the adult learner in respect to ABET would be to:-**

- Access the General Education and Training Certificate (GETC) and the Further Education and Training Certificate (FETC).
- help life long learning.
- acquire, as set out in Curriculum 2005, the confidence and motivation for taking responsibility for their learning.
- Promote economic, academic, professional and personal upliftment.

**The importance for companies in respect to providing ABET training would be:-**

- As part of the Skills Levy Act if they provide accredited courses to their employees companies will be able to claim back a percentage of their outlaid training cost (there is still however controversy surrounding what will eventually be the actual claim back amount).
- Better co-operation between employees and management.
- Impact on worker morale, improved opportunity for career pathing.
- Increased productivity.

Employees value ABET as an integral part of Multi-Skilling. Their views are reflected fully in Chapter 5.

### **4.3 CRITIQUE OF WORKPLACE ABET**

Although ABET is seen as having a vital link to Multi-Skilling there are also some cautions.

Pritz and Imel (1993) have raised issues about the goals and purposes of workforce literacy. Among these issues has been the debate surrounding the conceptualization of workplace literacy as a functional contest programme, its focus being on analysing the gaps between a workplace's literacy requirements and the abilities of its work force.

Critics have felt that, too often, the job context approach was interpreted too narrowly and failed to involve the employees. Frequently, the result was a curriculum designed to "fill in the gaps", usually through a top-down process with decisions made primarily by Company Management, Human Resources Development specialists and higher level educational experts (Pritz and Imel 1993).

However ABET within the Multi-Skilling programme at Toyota SA is a voluntary programme. It is intended to provide illiterate and semi literate workers an opportunity to acquire the basic and general skills for literacy. It is a spring board for their further education and training and is linked to specific further training modules with direct benefits to the employee in terms of upgrading and pay. As it is the employees who *elect* for Multi-Skilling and/or ABET, there is thus no "top down" approach taken but instead an invitation to participate in learning and in so doing to derive direct benefit from being "Multi-Skilled". This takes place through improved job grades and pay.

The response from Toyota SA employees has been excellent with well over 360 employees voluntarily registering for ABET.

With this link of Adult Basic Education and Training (ABET) now in place within the Automobile Manufacturing Industries in South Africa, previously disadvantaged and semi and illiterate employees are now in a position to begin a career path of learning. This will enable such employees to embark on the Multi-Skilling programme as set within the Automobile Manufacturing Industries.

It needs to be pointed out that whilst there has been general positive feedback of the contribution of ABET to the work situation and with well over 360 employees currently participating in ABET at any one time, it has been observed

through the providers of ABET training that for some employees the journey along the learning path in respect of ABET could see them taking much longer to grasp and/or complete this course of learning. This is due to mostly to production requirements for overtime work. Overtime work allows employees to achieve their daily output scores. This coupled with the opportunity to earn additional immediate pay sometimes has the effect of employees missing classes in favour of overtime and of thus extending the duration of their programmes of learning.

Notwithstanding the above the overall effect of entry into this learning path and especially for those more literate employees is that the objectives of acquiring a “world class manufacturing status” with a global competitive stand can start to become a reality as employees gain, through the programme, a better understanding of the meaning of their jobs having completed Multi-Skilling core modules dealing with such issues as:

1. Health and Safety
2. Employer/ Employee Relations
3. Communication Part 1&2
4. Manufacturing concepts
5. Material Management
6. Team work
7. Understanding our business
8. Quality Management

These taken together have given meaning to jobs for employees and provides employees with a better understanding of how exactly their jobs are linked to the overall manufacturing process. Once this is achieved - the result of a literate workforce – the objective of acquiring “world class manufacturing status” with a global competitive stand becomes a closer reality.

An understanding of this link has been a major achievement of the Multi-Skilling programme demonstrated via the expressed views of employees voicing



their opinions through written communication within a leading Automobile Manufacturer. These are highlighted in Chapter 6.

#### **4.4 THE NATIONAL QUALIFICATIONS FRAMEWORK (NQF)**

Another essential link to the Multi-Skilling route will be the alignment of the Automobile Manufacturing Industry Certificate (AMIC) with the National Qualifications Framework (NQF).

To understand this link, I will first explain the role of the NQF, and thereafter explain the intention of the Automobile Manufacturing Industries with regard to their (AMIC) qualification. The stakeholders, that is government, employers and labour had agreement on the levels of the qualifications framework before they were gazetted. (Bird 1991, NTB, 1993, HSRC, 1995, Wits EPU, 1996, NQFI).

In early discussions around ABET, COSATU began to determine the principles governing the direction of education and training for Industry. Their demands focused on three main areas:

- Adult basic education
- Women workers
- Training

For the purpose of this study I will concentrate on the training aspects with its relevance to industry, in relation to Multi-Skilling

COSATU's demands for training were as follows:

- Linking training to economic planning and restructuring
- Union involvement in training at all levels.
- Efforts to avoid the class, race and gender discrimination of the past
- Duty of the employer and the state to train and finance training efforts
- A worker's right to paid leave for training
- Retraining of retrenched workers.

- Life-long training to equip workers for technological change and further self development\*
- Clear links between formal schooling, adult education and industrial training.
- Training and skills must be linked to grading and pay\*
- Workers must advance along a career path through training\*
- Training must be certified at a National or Industrial level\*
- Provision must be made for skills the workers already have\*
- Training of trainers must be the key to the effective functioning of the system. (Bird, 1991)

Although I have quoted the training principles in total, what is of importance in the section above are statements marked with an asterisks. These in particular have direct bearing on any employee intending to embark onto the Multi-Skilling programme as set within the Automobile Manufacturing Industries within South Africa.

It needs to be noted that it is the intention of the Motor Manufacturing Industries of South Africa to have their Multi-Skilling Certificate (AMIC), registered under the NQF framework as a recognised qualification. Thus such a qualification once obtained by an employee would be value not only to the employee in terms of monetary rewards but also in terms of portability of skills within the Automobile Manufacturing Industry at large. Although this is still in its primary stages within the Automobile Manufacturing Industries, the intended pitch level of the AMIC Certificate will be at NQF Level structure 1. (See diagramatic representation of the National Qualifications Framework in Figure 1 for positioning of the AMIC certificate).

# THE NATIONAL QUALIFICATIONS FRAMEWORK

**Figure 1**

NQF Level	BAND	Type of Qualifications and Certificates		Locations of Learning		
8	Higher	Doctorates Further Research Degrees		Tertiary/Research/ Professional Institutions		
7	Education	Higher Degrees Professional Qualifications		Tertiary/Research Professional Institutions		
6	And Training	First Degrees Higher Diplomas		Universities/Technikons/ Colleges/Private/Professional Institutions		
5	Band	Diplomas Occupational Certificates		Universities/Technikons/ Colleges/Private/Professional Institutions/Workplace/etc.		
Further Education and Training Certificate						
4	Further Education	School/College/Trade Certificates Mix of units from all		Formal high schools / Private / State Schools	Technical/ Community /Police/Nursing/private colleges	RDP and Labour Market schemes, Industry Training Boards, union, work-place etc.
General Education and Training Certificates						
3	And Training Band	School/College/Trade Certificates Mix of units from all				
2		School/College/Trade Certificates Mix of units from all				
General Education and Training Certificates						
1	General	Std 7/Grd 9 (10 years)	ABET Level 4	Formal Schools	Occupational / Work based training / RDP/ Labour Market schemes / Upliftment programmes / Community programmes	NGOs / Churches / Night schools / ABET programmes / Private providers / Industry Training Boards / Unions / Workplace etc.
	Education	Std 5/Grd 7 (8 years)	ABET Level 3			
	And Training	Std 3/Grd 5 (6 years)	ABET Level 2			
	Band	Std 1/Grd 3 (4 years)	ABET Level 1			
		1 year reception				

The NQF framework will now be described so that there is a clear understanding of where the AMIC will be positioned in relation to the national education framework.

As can be seen from the above diagram, the NQF, like the qualifications structures in Australia and New Zealand, is structured in eight levels, (Bird, 1991, NTB, 1993, HSRC, 1995, Wits EPU, 1996, NQF!).

These eight levels are categorised into three bands (IPM Brief, 1995a, Wits EPU, 1996). These bands are closely linked to the current primary, secondary and tertiary levels in education, as well as integrating education and training levels of education.

Band one is the General Education and Training (GET) where General Education certificates would result either from formal schooling or from ABET structured courses. The GET correlates with NQF Level 1, this level includes four ABET Levels, ie Level 1 - 4. (HSRC, 1995, WITS EPU, 1996)

Band two is Further Education and Training (FET). This band corresponds to Levels 2-4 of the NQF Framed Model. It is obtained in schools, the workplace, industry training boards or colleges. (WITS EPU, 1996).

Band Three is Higher Education and Training. This band corresponds to Levels 5-8 of the NQF Framed Model. It is awarded at Universities, technikons, colleges, by employers and employer groups (WITS EPU, 1996). This band extends from Level 5 which relates to diplomas and occupational certificates (obtained at the workplace or tertiary institution) through to level 8 which relates to doctorates and further research degrees (awarded by universities or professional institutions) (WITS EPU, 1996, De Villiers, 1997).

## **4.5 SUMMARY**

The NQF is seen as having a positive impact on the quality of Education Training in the Country. The implementation of the NQF is not a once-off transformation exercise but will require ongoing maintenance and adaptation for increased relevance. Additionally the NQF is not merely bringing a set of new

challenges to industry but is providing a tool for standardisation and improved relevance of a current system. The Automobile Manufacturing Industry Certificate (AMIC) will be one such qualification to be registered with the NQF, where employees now have a recognised route regarding their education component, and it is seen as a starting point for further studies. (This registration still needs to be accredited through the Automobile Manufacturing Industry by the NQF).

The third link as highlighted in chapter four under point 4.6 below is that of the “Skills Development Act”. It is encouraging to see that the government is aligning workplace strategies to develop the skills of the workers. This is in direct line with the thinking of the Automobile Manufacturing Industries through the implementation of their Multi-Skilling Programme. Once again, it is important to understand *how* the “Skills Bill” will play its part within the entire process. I will now attempt to provide the reader with the relevant text outlay of the Skills Development Act.

## **4.6 SKILLS DEVELOPMENT ACT**

### **4.6.1 The Act**

The main purposes of the Skills Development Act are to:-

- Provide an institutional framework to devise and implement national, sector and workplace strategies
- develop and improve the skills of the South African workforce
- integrate those strategies within the National Qualifications Framework Contemplated in the South African Qualifications Authority Act, 1995
- provide for the financing of skills development by means of a levy – grant scheme of a National Skills Fund
- provide for, and regulate employment services
- provide for matters connected therewith.

In terms of The Skills Development Act, critical elements will be otherwise discussed either as definitions, purpose and or application of the ACT, to address the issues of discussion for the purpose of this study.

## **4.7 THE SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA) ACT**

### **4.7.1 Purpose of Act**

The importance here, in relation to the Multi-Skilling development of an employee are the purposes of the act as selected. These are to

- develop the skills of the South African workforce,
- improve the quality of life of workers, their prospects of work and labour mobility,
- improve productivity in the workplace and the competitiveness of employers, and
- encourage employers to use the workplace as an active learning environment: and to provide employees with the opportunities to acquire new skills.

Although only relevant issues above were selected as “Purposes of Act”, these purposes were to have been achieved by:-

- Establishing an institutional and financial framework comprising.
  - The National Skills Authority;
  - The National Skills Fund;
  - A Skills Development levy – grant scheme as contemplated in the Skills Development Act;
  - Sector Education and Training Authority (S.E.T.A)
  - Labour centres;

- The Skills Development Planning Unit;
- Encouraging partnerships between the public and private sectors of the economy to provide education and training on and for the workplace; and
- Co-operating with the South African Qualifications Authority.

As can be seen the objectives of both the Skills Development Act and the South African Qualifications Authority Act are responses of the state to historic imbalances and an attempt to ensure that training and development programmes would in future meet national standards. As such it is important that they are directly incorporated in the overall design of any Multi-Skilling programme so that all work in direct harmony with each other to achieve common objectives of quality education and training of world class standards.

#### **4.8 COMMENT**

With the current exit of skilled persons from South Africa to overseas countries and the general low level of education amongst industry employees, Multi-Skilling in the form described so far (that is, by including ABET and industry specific skills training in line with national education goals) may well be an answer to addressing skills shortages in the immediate to longer term. The backdrop to this shortage of work-relevant skills is a context of perceived political uncertainty as crime rates increase, discouraging direct foreign investment in local economies. The effect is a weakened rand plus lower investor confidence and unemployment rate rising above the fifty (50%) percent mark (Mashingo, 1994); CSS, 1995).

However, according to Mashingo (1994), the provision of relevant skills to a nationally and internationally recognised standard as a means, is necessary for

- Equipping the nation to deal with resultant new market pressures;
- Providing useful skills to aid individuals in employment;
- Acknowledging those who have acquired skills but have not been recognised to this point.



The importance of skills development has been recognised by the Government. Improved skill levels should positively affect the quality and production levels within the Automotive Manufacturing Industries in this country. This in turn should then have a positive effect for South Africa from a global perspective since an up-liftment of the economy would improve employment opportunities nationally and encourage international investment into South Africa.

#### **4.9 CLAUSE 26 OF THE NATIONAL BARGAINING FORUM (NBF) SKILLS BASED GRADING TRAINING AND WORK ORGANISATION**

In this section I shall deal with a further imperative link that has proved to be important in implementing the Multi-Skilling programme within the motor manufacturing industry perse.

The reader needs to fully understand the importance of this agreement, known as Clause 26 of the National Bargaining Forum (NBF) as it not only governs training in the Motor Manufacturing sector but is historic in being a major turning point in agreement following lengthy negotiations between the employers and labour representatives of the combined Automobile Manufacturers Industry of South Africa. (Note, these negotiations excluded Automobile Assemblers for example, Hyundai, Volvo, Kia). I shall thus unpack this clause as it was negotiated from the tabled agreement (see Annexure 1 for the detailed negotiated Clause 26).

##### **4.9.1 Background**

Prior to NBF agreement on education and training within the industry the situation in regards to education and training was that no standardization of training existed across individual industries. Training proceeded within individual organizations on a needs driven basis and was generally available to salaried employees only - that is, supervisory levels and above. Under this old system large numbers of employees within the motor manufacturing industry, namely hourly paid grades were thus excluded from training. For these



employees it meant remaining in the same job category, performing the same job function for close to 20 years in some instances.

As a result of the efforts of the NBF according to which all education, skills training and development strategies within the motor manufacturing industry where they affect individual employee member interests, such hourly paid grades are for the first time included within an overall new and improved system of training and development.

Furthermore within the new training framework all training will first need the approval of the National Bargaining Forum (NBF) of the Automobile Manufacturers Industries. No training within member industries may proceed without the firm support and endorsement of all participating members.

Thus the significance of Clause 26 is that the Multi-Skilling programme, being a means of bringing about change and improvement in output via a training and development programme, could not have proceeded without full support of the NBF.

This final but key imperative for the successful implementation of the Multi-Skilling programme demonstrates that such programmes require not just “buy in” to an idea but actually “full support” following, in this case, negotiated settlements around matters concerning both employers and employees with each member representative ensuring the best outcome for his/her member interest within the systematic and full exploration of all implications of the suggested training framework.

The thoroughness of these deliberations meant that real support for training and not just “endorsement” from the NBF has been vital to the successful implementation of the Multi-Skilling programme with all representatives ensuring that their membership were fully appraised of the objectives, the implications and merits of such a programme in terms of impact on the companies but also on individual employees as well.

#### **4.9.2 Clause 26**

Clause 26 of the NBF is an important element in the Multi-Skilling programme as it brings together in-principle agreement over the importance of education and training to the longer term survival of the South African Motor Manufacturing Industry.

However it goes further as it sets out agreements over new ways that this can be achieved - that is, by creating a healthy and rewarding working environment together with a flexible organisation capable of meeting the needs of the industry and workforce.

The framework agreement had been negotiated in the context of an understanding by all parties (that is employers and employee representative/unions) "that in order to ensure the long term viability of the South African Automobile Manufacturing Industry and enhance job security for all employees, a new industry education and training dispensation needed to underpin changes in work organisation." (Automobile Manufacturing Industry, NBF Agreement 1993)

The agreement has two key elements: namely agreement on a new skills based grading structure and an agreement on education and training to support changes to work organization. Its specific objectives were to:

1. Create a highly skilled and educated workforce to support the manufacture of high quality, affordable vehicles for the domestic and international markets.
2. Create a more healthy, satisfying and rewarding work environment.
3. Create a new structure allowing the opportunity for an integrated career path with appropriate education, training and experience for those participating in the new structure. Such a structure would be seen as part of a new integrated national education and training system.

4. Facilitate a flexible work organisation to meet the individual manufacturers and workforce needs.

Following on from these, Clause 26 set about detailing the specifics of education and training across the motor manufacturing industry at large that would realistically allow the industry to achieve its four-fold objectives. It further agreed that any amendments to the clause would require full agreement from all parties to the AMIETB within the broad guidelines established by the NTB.

The significance of Clause 26 is that for the first time in its history all members were involved from the start in intensive and extensive negotiations relating to human resource development across the industry, secured firm commitment from all parties to both uphold principles agreed and strategies devised that would serve as a binding agreement on the future approach to education and training across all organisations. In effect it details both the structure and content of “how ” exactly the motor manufacturers in South Africa could achieve the desired objective of surviving in the world competitive stakes via strategies involving new and different ways of training and development its human resource.

I shall now briefly provide an overview of just some aspects of Clause 26 that have had particular impact on the design and implementation of the Multi-Skilling programme.

#### **26.4 NEW SKILL BASED GRADING STRUCTURE AND TRAINING**

The new education and training dispensation first and foremost set out an accreditation mechanism to acknowledge employee training where this has been in line with agreed needs of the industry.

Thus the establishment of a certificate system for grades below artisan and the new grades above artisan was central to the successful implementation of the new structure. It consists of standardised modules leading to a recognised AMIETB qualification.

This development means that not only could a newly trained employee utilize his/her skills elsewhere across the industry but could also derive direct benefits in terms of improved rates of pay according to the new revised grading structure that was also designed for training and development.

Furthermore firm commitment from all employers on the issue of career development for individual employees meant that those seeking further education and training would be afforded every opportunity to both undertake training and build their careers within the industry itself.

Thus Clause 26 provides for an achievable and attainable training goal that acts, by design, as an attraction for employees to stay in the Industry.

### **New Skills / Grading Structure**

The upward mobility of employees through the new skills training and grading structure is covered extensively by Clause 26. It allows employees to progress in a step by step fashion to higher levels where this is possible in terms of operational needs and where such vacancies exist. In this way Multi-Skilled artisans who are certified in accordance with the AMIETB requirements can be accommodated in labour grade 6, Technicians within labour grade 7 and so on. In all deliberations the AMIETB has devised mechanisms to recognise prior learning, allowed for module and curriculum development, set skills standards, accreditation and certification processes in line with the industry's training and development objects.

Of particular relevance for Multi-Skilling has been the priority given to labour grades 1 through to 4 – that is, those illiterate or semi literate employees previously excluded from all training but who are now firmly included in training and development as a result of Clause 26. It is this category of employee on which Clause 26 has had significant impact and the Multi-Skilling programme guided in design by it, has allowed significant numbers of employees a step up and out of job categories they'd previously been limited to for 10 years or more.

### **Career Progression and Accreditation**

Under Clause 26 employers are required to inform employees of their career path choices and thus progression through the structure from base level 1 to level 7 is dependent on work organization, production requirements plus the career aspirations of employees. Progression will only occur once competence has been demonstrated to the level of AMIETB agreed standards and the employee has been awarded a specific exit certificate.

To complete the requirements of a new certificate however employees would need to demonstrate competence in terms of their education, knowledge and skills standards determined by the AMEITB so that they could participate in a wider range of activities not normally included in such a structured fashion – viz improving work organizations, understanding the roles and responsibilities of teams, use and maintenance of tools and equipment etc which together provides a wider view of “training” than it was previously defined. See Annexure 1 for detailed breakdown.

The starting point for all training and development was set out in Clause 26 as a framework for an education and skills audit on every employee at plant level who elects to participate in education and training. The purpose of this audit was to determine the education and training requirements of each individual employee, based not only on his needs but recognizing all prior learning (RPL). This way in terms of the PRL models developed by the AMIETB within the guidelines determined by the NTB.

### **Module Development/Standardisation and Accreditation**

Clause 26 went further to specify completion dates for an audit of available resources including existing artisan and plant specific training. It requested all parties to submit their requirements in respect of knowledge, skill and education to the AMIETB by June 30, 1994 or earlier, as it would be required by their production process as well as their requirements in respect of:

- (i) Core modules (e.g., communication)

- (ii) Specialisation modules (i.e. Technical, administrative, quality and organisational training)
- (iii) Number of plant specific modules (e.g. company production system)

Arising from this data and data obtained by the agreed audit of existing education and training, in terms of (a) above, the AMIETB then developed a broad framework comprising of core modules, specialization modules and plant specific modules.

This framework specified the total number of knowledge, education and skill modules at each of the levels as well as the extent of core, specialisation and plant specific modules at each level.

The industry framework included design, accreditation and administration of education and training programmes necessary to support career paths and progression of employees.

Within the parameters set by this framework the parties at plant level will be obliged to negotiate and agree on the combination of modules that best suits operational requirements and employee needs.

The following serves as a broad guideline of module development subject to amendment by the AMIETB:

<u>NEW SKILL LEVEL</u>	<u>QUALIFICATION</u>	<u>QUANTUM EQUIVALENT</u>
Level 1	Certificate 1	20% artisan modules
Level 2	Certificate 2	40% artisan modules
Level 3	Certificate 3	60% artisan modules

Level 4	Certificate 4	80% artisan modules
Level 5	Artisan certificate  Or equivalent  Certificate  Agreed by the AMIETB	100% artisan  modules
Level 6	Multi-skilled  Artisan certificate	120%  Artisan modules
Level 7	Technician	140%  Certificate

Note: Quantum and % value do not refer to content but to number of modules.

### **Standardisation**

The basis of all qualifications throughout the Industry was to be standardised modules consisting of AMIETB recognised competency outcomes.

Modules shall fall into two broad categories:

- i) Core Modules (such as communications, mathematics or social environment) which form the compulsory component of each qualification level. These modules were to be developed and agreed by the AMIETB.

- ii) Specialisation Modules which included all technical, skill, administrative, quality and organisational training.

Both the specialist and core modules were developed and accredited by the AMIETB to standardised competency outcomes using existing resources, new resources and existing artisan training curricula where appropriate.

Included in specialisation modules are those modules which may be considered “in house” or plant specific. Such modules, said Clause 26 would satisfy the AMIETB that they were of equivalent educational value to other modules in this category. The AMIETB would determine and agree the maximum extent of “in house” or plant specific modules after completion of the process agreed on module development in 26.4.4 above.

Furthermore all modules could be “contextualised” to reflect the language and practices of a particular plant in so far as this did not compromise AMIETB recognised competency outcomes for that module. The parties recognised that was the inefficient use of the Industry’s resources that had previously allowed a proliferation of training modules with similar content but plant specific language. Variations to standard modules could now be achieved through “contextualisation” of curriculum materials.

All parties involved in negotiating this new skills and development framework went on to the very detailed discussions regarding how this could be achieved – that is funding and actual time required to undertake the training and education of their employees.

In this regard Clause 26 set out the time commitments required from both employee and employers, the processes required for accreditation and the rates of pay to be received.

### **Employees Entitlement to Training**

All employees participating in the skills development programme were to be entitled to do a minimum of two (2) AMIETB’s accredited modules before the June 30, 1995 and thereafter and additional two (2) modules before the June 30,



1996 provided that the parties negotiated and agreed on additional training at Plant or Industry level if the need arose.

### **Changing Work Organization and Flexibility**

Under this agreement all parties also committed themselves to improving quality, productivity, and employment security in the Industry and agreed that measures that focus solely on labour productivity and work intensification were a short sighted inefficient approach to this commitment.

Thus, education and training, it was agreed, would form a part of a total approach to developing effective flexible work organisation. The focus would be development of broad generic skills that provided the foundation for flexible working arrangements instead of narrow task-based training. And competency in core skill areas such as communications and mathematics were to be seen as an essential prerequisite for effective work organisation and technical skill formation.

### **The Team Concept**

The parties agreed too that the development of skills in isolation would not bring about the required improvement unless skills were developed to support this new form of work organisation that would contribute to the longer term viability of the Industry.

Thus it recorded that excessive hierarchical structures and narrow task based labour were “uncompetitive in modern manufacturing” and recommended that work teams be introduced through negotiation at plant level within the parameters set by broad Industry guidelines.

To facilitate the above commitment the parties agreed to meet monthly (in the NBF Job Security and Productivity sub-committee) to finalise, by June 30, 1994, or sooner, Industry guidelines on teamwork.

## **THE TRANSITION PHASE**

During this period, whilst employees retained their present job titles and grading structures, they transferred from the existing grading system to the new skills classification system (eg Grade 1 employee will become a skill level 1 employee). Also as soon as the assessment tools for recognizing prior learning instruments were finalized, employees participating in the skills development programme undertook their assessments. Under the terms of the new structure:

1. An employee will only move across to a new skill level once it has been finalised and accredited and the employee has satisfied all the requirements (ABE, core, specialisation and plant specific modules) for that level and the preceding levels. Skills recognised by the RPL model will be accredited and will not have to be repeated.
2. An employee will not be downgraded if the skills assessment proves that he/she lacks the skill requirement for the appropriate new skill level.
3. An employee who qualifies for a new skill level in terms of the above, will receive the wages linked to that particular skill level.

## **INSPECTION / RELIEF / ALLOWANCE**

The parties recognise that, central to the new certificate structure was the requirement that employees perform work to the level of their certification and competence. It was thus agreed that, at all levels, employees were responsible for the quality of their own work to their level of certification and competence and, as required, the overall quality of the component/product as it passes through the work station/area.

Accordingly Clause 26 detailed too, the agreements reached on various allowances paid to “relief” “pool” or “absence cover” employees insofar as they were to be discontinued by notice to the unions, local and head office, once the new training dispensation had been implemented.

#### **4.10 SECURING COMMITMENT THROUGH NEGOTIATION AT THE NATIONAL BARGAINING FORUM**

With the governance guidelines set at the National Bargaining Forum via joint agreement between the seven Automobile Manufacturers already mentioned in chapter four, and the two Unions, National Union of Metal Workers of South Africa (NUMSA) and South African Workers Union (SAWU) the following structure (see figure 2), has been inserted so that the reader becomes familiar with the National Bargaining Forum, (NBF), recognise Unions, NUMSA / SAWU and clause 26, as already mentioned in chapter four above.

#### **4.11 CONCLUSION**

Clause 26 “Skills Based Grading Training and Work Organisation” as agreed by the respective role players of the Automobile Manufacturing Industries has definitely laid the foundation principles for the implementation of Multi-Skilling within the Automobile Manufacturers. From this stand point, the seven Automobile Manufacturers then had to develop their own Multi-Skilling Framework that individually would best suite their operational needs.

With the journey thus far, the reader now has a perspective on Multi-Skilling, evident change possibilities regarding the Automobile Manufacturing Industry within South Africa, in respect of the implementation of the Multi-Skilling programme.

In the following chapter, I will investigate whether the terms, principles and objectives detailed in Clause 26 do in fact support workers and what the combined effect of all agreements reached as set out in Clause 26 has had on the workforce of the Automobile Manufacturers in South Africa.

## **CHAPTER FIVE**

### **THE CASE STUDY**

#### **5.1 INTRODUCTION**

As part of this study, an in-depth case study was conducted with the Leading Automotive Motor Manufacturer as determined by the Automobile Manufacturing Education Training Board. To date a total of 1000 Automobile Manufacturing Industry Certificates (AMIC) have been issued through the Training Board to employees that have successfully exited Level 4 of the Multi-Skilling Framework, within Toyota South Africa.

The Automobile Manufacturing Industry under study is Toyota SA Ltd. It is situated in Prospecton, Kwa-Zulu Natal.

I will begin with a brief historical introduction to Toyota SA Ltd, and will then detail progress from the inception phase through to the design phase and onto the implementation phase of the Multi-Skilling Framework.

This programme was headed up at the time by Dr WP Pienaar, the Group Technical Training Manager together with the Technical Training Division with guidance from the negotiated NBF agreements.

#### **5.2 HISTORICAL BACKGROUND TO TOYOTA SA LTD**

Toyota South Africa was established in South Africa in 1941 by Dr Albert Wessels. Up until late 1996 Toyota South Africa was the only privately owned Assembly Plant outside of Japan. All worldwide Toyota Plants are owned by Toyota Motor Corporation (TMC) based in Japan. During 1996 Toyota Motor Corporation (TMC) purchased a 27% share holding in Toyota South Africa (TSA).

Both the assembly and component manufacturing plants are situated in Durban Kwa-Zulu Natal with the major marketing and parts holding/ distribution centres based in Johannesburg. At the outset of the introduction of the Multi-Skilling

programme, Toyota SA employed in excess of 9100 people of whom 8000 people were based within the Durban area.

Dr Albert Wessels played an extremely active role in the company until his death in 1991. His eldest son, Bert Wessels took over as Chief Executive Officer with his daughter Elizabeth Bradley holding the position of Toyota SA vice chairman. Although Toyota Motor Corporation (Japan) are one of the major share holders of Toyota SA, the Wessels family still have a great influence in the running of the entire operation, and retain a 51% share holding on Toyota SA through their WESCO holding company.

The main plant produces 500 vehicles off-line per day, with a model line of Corolla, Conquest, Camry, Hi-Lux, Hi-Ace and a Venture range. Heavy trucks are also produced that include the Hino, Dyna and Peterbuilt (from the USA). The main Assembly Plant situated at Prospecton (Industrial area) consists of two body shops, two paint shops, an assembly hall, two engine plants, a trim shop (upholstery) and a vehicle final area.

Toyota SA has led a relatively protected existence for 54 years - that is, complete with tariff protection, government grants and a captive market share. With the rapid re-absorption of South Africa into world markets since the 1995 democratic elections the South African Motor Industry has now been exposed globally as never before.

Toyota SA has enjoyed the position of South Africa's best selling vehicle over 17 years with an overall market share of 28%. Now, with Toyota Motor Corporation (TMC) having a 27% holding share within Toyota SA, there is an increase in Japan's involvement in South Africa which will result in closer technological ties, re-access to the global distribution network and greater economies of scale. Toyota SA, is currently involved in a major business process redesign programme aimed at re-aligning the business in respect of "World Class Status."

With the focus now on a competitive review, in respect to global positioning, Toyota SA, with a 27% share holding by Toyota Motor Corporation (Japan)

needs to evaluate the principles, philosophies that drive Toyota Motor Corporation, who are a globally competitive role player.

I will now outline the principles and philosophies that have guided Toyota Motor Corporation in order to develop understanding of the “culture” that has contributed to it achieving status as an international world class manufacturer. This becomes relevant for Toyota SA which has to develop a similar culture in order for itself to achieve world class status.

### **5.3 TOYOTA MOTOR CORPORATION (TMC) JAPAN** (Ref: policy documents of TMC and personal observation)

#### **5.3.1 Principles and Philosophies**

The following sections were sourced from key policy documents governing the work environment at Toyota Motor Corporation (TMC) Japan. They describe the key principles and operating environment at Toyota Motor Corporation (TMC) Japan. These include:

##### **Mutual Trust**

1. In order to support the Company’s effective management systems, the key concepts here are:
  - a) Maintaining flexibility
  - b) Promoting a “Kaizen” mind
  - c) Teamwork
  - d) Human Resource Development
2. The following conditions are pertinent to establishing a working environment that encourages employees to be highly motivated to work.
  - a) Establishing a stable working environment.
  - b) Long term employment.
  - c) Stable working conditions

3. In order to raise and maintain employee motivation the employer should ensure

- a) Fair appraisal and treatment.
- b) Communication.

(Source: Toyota Motor Corporation (TMC) Japan Policy Document)

It is clear in understanding that the driver of Toyota Motor Corporation is their “Human Resources Management”, where the foundation of TMC Human Resources Management is based on the principle of **mutual trust** between the Company and its employees. “**Mutual trust**” here, means that the company and its employees respect the rights and responsibilities of each other based on a trusting relationship. This is to say, the company understands that in order to prosper within the global competitive field, the performance of its employees must, indeed, be of a high standard. Based on this understanding TMC continues to be committed to respecting its employees and continues at improving the employees working conditions. In return, their employees themselves understand that the improvement of their working conditions depend on the success of their company’s business on a global competitive basis. Thus the employees make a concerted effort to comprehend their company’s business situation and collaborate with their company in the promoting of policy for further corporate developments.

In these terms “mutual trust” between the company and employees” can be summarized as, the company’s trust in their employees to fulfill their responsibilities for the sake of their company’s business success, and the employees trust in their company to fulfill its responsibility of improving working conditions for them.

The fundamental factor for establishing mutual trust between the company and its employees is a solid co-operative relationship at all levels of the organisation such as the relationship between supervisors and its group members (workers).

For example, Supervisors and group members try to mutually understand and respect each others situation, their rights and each others responsibilities, and

therefore co-operate with each other toward achieving a common goal, that of, high productivity.

Based on mutual trust, policies and systems are actively implemented. However there are two main purposes for these policies, and they are explained as follows:

#### **5.3.1.1 The First Purpose**

The first purpose of TMC Human Resources management is to support effective management systems such as the Toyota Production System (TPS) for the prosperity of the organization. To accomplish this, the company needs to establish business systems which would enable the company to design, produce and sell the highest quality products by maximizing the use of resources in order to satisfy its customers. In regard to productivity, TMC has established an efficient production system by aiming for thorough elimination of waste in all aspects of their manufacturing processes. **People**, are the main factor that make this system work.

#### **5.3.1.2 The Second Purpose**

The second purpose is to encourage employees to be highly motivated towards work. As previously mentioned, the employees play a vital role for the smooth execution of the Toyota Production System. Accordingly, the company needs to create and maintain a working environment where all employees can contribute their individual creativity and maximise their ability. TMC, however is committed to establishing systems which in turn create and maintain a stable work environment in order to raise their employees motivation.

In order to understand the company's effective management system, there are however four main concepts that need to be explained, and these four concepts are;

- a) Maintaining flexibility
- b) Promoting a Kaizen mind (see below, 6.8)



- c) Team work
- d) Human Resource Development

## 5.4 MAINTAINING FLEXIBILITY

This refers to the maintenance of a flexible organization, working schedules and staff planning. This enables the company to respond to the fluctuation of its production volumes, as the demand for automobiles tend to be subject to fluctuation due to change in factors such as the economic situation and that of consumer tastes. It is clear, that TMCs policy does not justify responding to these fluctuations within its production demands merely by increasing or decreasing its number of employees. In the non-flexible organisation the company tries to achieve the necessary profit margins by changing production schedules or by changing employee working schedules and job assignments instead of increasing its employee levels. Similarly when there is a decrease in demand, TMC does its best to maintain high productivity, and therefore avoids retrenchments, by making adjustments to their production layout and staffing.

In addition, as TMC has minimal job categories, the company is able to be flexible and determine the job assignments in order to respond to fluctuations within their production volumes. Accordingly, the employees are not hired for specific jobs, and the company determines each employees assignment, with consideration to their aptitude, requests and staffing needs. Moreover, even after employees are posted to their assignment areas, employees are still flexibly moved, as and when necessary, through the TMC System of rotational or temporary transfer within the company. For the employees themselves, this flexibility of Job rotations give them an opportunity to be exposed to different operational duties, within the company.

To further address the response to demand fluctuations in the daily production needs, overtime, that is, Saturday/Sunday work is considered. Overtime is flexibly scheduled accordingly to the relation between the production plan staffing and movement in daily production. When Saturday/Sunday work is necessary, then the Supervisors and group leaders attempt to fully explain the

reasons why such overtime is necessary, to their subordinates. It is noted that group leaders pay a great deal of attention to the physical condition of their subordinates. This takes place during the 10 minute feedback/input session that takes place each morning before production commences.

## **5.5 STAFFING PLANS**

Manufacturing processes are continually revised, in response to change in production schedules. In such cases, supervisors, redistribute job duties giving full consideration to the relative difficulty of each process and the skill level of each employee. The purpose is to obtain a good line balance and to treat employees fairly, according to their capabilities.

When a group does not have enough group members (employees) to meet with the production demands, due, for example, to absenteeism, the supervisor is responsible for making necessary staffing adjustments within his group of members. Should the adjustment of staffing not be possible within the supervisors group then the supervisor would request that the assistant manager make the necessary arrangements for receiving temporary assistance from another group of employees.

Sale trends, may at times call for a substantial variation of production volumes by model. This may then lead to a disruption of balance in the production load schedules among plants. Workload balancing among the various plants is completed by temporarily transferring employees from maintenance to production, or from a plant with a relatively light production load to a plant with a heavier production level. In essence here, it is evident from what has been described thus far that Multi-Skilling plays an important role (in maintaining production).

Multi-Skilling as referred to at TMC, is referred to as “Multi-function employees”. The development of the “Multi-function employee” is promoted throughout TMC which is indispensable for achieving flexible staffing plans, developing employees abilities and widening their view points as has been described. A “multi-function employee” is one who can properly perform

several different job functions within the organisation. Supervisors are responsible for the drawing up of developmental plans for the multi-function employee within their group members, by taking into consideration each members aptitude, abilities and their opinions. Through this multi-function employee route, all members have the opportunity to increase their knowledge, skills of the different jobs that they are exposed to, and in turn share a know-how of the groups job functions with other members.

In addition, from the stand point of employees, their development into a multi-functional employee releases them from monotonous and repetitive work and therefore enables them to develop additional skills in different jobs which improve their abilities. To this end, the development of a multi-function employee supports TMCs philosophy in respecting their employees and positively affecting their motivation.

With the emphasis on continuously finding ways to improve quality, which is the key to global competitiveness, the Japanese are leaders in what is termed “Promoting a Kaizen mind”.

## **5.6 PROMOTING A KAIZEN MIND**

Kaizen is a Japanese term, which means an ongoing activity to improve productivity and quality, by changing the current methods of manufacturing.

Manufacturing processes consist of several factors such as.

- People
- Material
- Equipment
- Operational methods,

Kaizen is used at TMC to reduce cost, improve quality, increase productivity and safety levels by thoroughly eliminating waste of these basic factors in the manufacturing plants. At TMC, all manufacturing processes are designed for the most efficient functioning of a particular operation. All employees are

expected to follow the standardized work layout, and also think of ways to "Kaizen" their operation for better efficiency, the improvement of productivity, quality and safety levels by developing new methods. At TMC Kaizen is a daily and never-ending philosophy in all manufacturing plants. The creativity of each employee is constantly developed through their participation in Kaizen activities and has contributed greatly to improving manufacturing productivity and to the establishment of the company's effective management.

In conjunction with, or in support of the Kaizen activity, TMC, incorporates Quality Control circles and a "Creative Suggestion Scheme". Within these QC circles, employees form a circle team, which can jointly solve problems to establish more efficient methods for quality, cost and safety. In the Creative Suggestion Scheme each employee makes improvement suggestions about their particular job and implements their ideas. Through these daily "Kaizen" activities, the group leaders are able to increase the employees awareness of their responsibility for quality, productivity and safety.

## **5.7 TEAM WORK**

The third key concept in support of the company's efficiency systems, is that of "teamwork". Here a basic unit in the manufacturing plant within TMC is a group, which consists on average of ten people (although this number can differ from group to group because the function of each manufacturing plant determines the size of the group). Group members co-operate with each other and commit themselves to the daily manufacturing operations and Kaizen activities for better performance as a group. In addition, co-operation between processes is indispensable for the smooth execution of the Toyota Production System. Therefore, the company places great emphasis on the necessity of building team work and harmonious relations between employees. It is the responsibility of the supervisor to foster team work and to create a supportive atmosphere based on good relations amongst the members, This is achieved through the supervisor listening to his group members opinions, ideas and feelings and responding to them.

The concept of teamwork can be applied not only to the relationship among group members (workers) but also to all other relationships in the company, such as, between groups, sections, divisions and other plants. In other words, it is extremely important for each business unit to have a good communication link with one another's situation in order to address and solve problems quickly and co-operatively. Emphasis has always been placed on the promoting of communication for the enhancement of teamwork, through various activities, such as for example, formal group or committee based activities, and informal based activities such as sport events which have proven to be effective.

## **5.8 HUMAN RESOURCE DEVELOPMENT**

The fourth key concept which supports effective management is based upon the Human Resources Perspective.

TMC recognizes that its employees are the greatest asset of the company. The company, therefore, believes that its people are the most important factor for the effective management and for the smooth operation of the Toyota Production System. In accordance to this, the company has endeavored to develop the ability of its human resources for the achievement for better performance.

At TMC, human resource development is accomplished through a sequence factored to several activities;

- Setting the target through discussions with supervisors.
- Performing operations and developing their skills by "On the Job Training (OJT).
- Participating in company training programmes.
- Being evaluated by supervisors.
- Receiving feedback from evaluation results in discussions with supervisors whilst setting the next target.

As a key factor is on the job training (OJT), both supervisors and mentors support and instruct less experienced workers who do not yet have the adequate skills and abilities to perform daily operational duties. These members are given

continuous support until they reach the required performance levels. Through OJT, new appointees, as well as newly transferred team members, are able to learn the practical skills, knowledge and roles for their new daily operational duties. Here the supervisors are also expected to teach these team members practical Kaizen methods and develop these members Kaizen minds by taking of the developmental opportunities offered by QC circle activities and the Creative Suggestion System. This becomes one of the supervisors most important roles - that is, developing members abilities.

Employees are encouraged to participate in company training programmes which function as a supplement to daily OJT. This is organised into training by job classification and especially skills and knowledge training. The training by job classification is designed to provide each job classification such as " Team Leader", "Group Leader" and " Assistant Manager" with the opportunities to acquire the ability and the knowledge to fulfill each responsibility. All classifications are required to participate in each set course of training by job classification, both before and after promotion. In terms of Special Skills and Knowledge Training, employees learn the practical skills and knowledge for performing their daily operational functions.

In addition TMC has developed a system called, "Specialized Technical Skills Certification", which is aimed at improving the production members skill and knowledge. Within this system, four technical standards are developed within each "Division" according to the length of job experience. Those members who meet the standard for their respective level are given a company certificate in the certified grades of C, B, A, or S, with "S" being the highest level of performance. This system in turn allows the team members to acknowledge their expected level of technical skills and knowledge as well as providing a challenge to team members to raise their own ability. Through the evaluation of members jobs, the supervisor tries to accurately group the members performance and ability in order to be able to determine an appropriate development plan for the members. A "consultative systems approach" here provides the supervisor and his members the opportunities for effective communication in which they

discuss items from their appraisal feedback, such as their strengths and weaknesses, as well as how to further develop the members skills and capabilities.

With this in mind, a mechanism needs to be in place to achieve a standing relationship between the company and its people - in other words - to establish a working environment of highly motivated personnel. In the next section the writer will outline the mechanism that is used to motivate the personnel of TMC.

## **5.9 ESTABLISHING A WORKING ENVIRONMENT THAT ENCOURAGES EMPLOYEES TO BE HIGHLY MOTIVATED**

The foundation for creating such a working environment where all employees are highly motivated to work, is to firstly create and maintain a working environment that is

- safe
- stable
- healthy .

Having established this foundation, the company can then raise and maintain its employees motivation to work with enthusiasm, and how this is achieved is described in the next section.

## **5.10 ESTABLISHING A STABLE WORKING ENVIRONMENT**

The establishment of a stable working environment is dependent on the following two concepts.

- long-term employment
- stable working conditions

Long-term employment can be achieved when, as a practice, both the company and its employees make efforts to maintain a stable and long-term relationship based upon a philosophy of mutual trust. This is a contrasting practice from a company which fires its employees based on short-term needs such as slow production requirements. This long-term employment system can be attained

through the combined efforts of both the company and its employees. For instance, without the employees co-operation with the flexible staffing system such as temporary transfers, overtime or Saturday/Sunday work, it would be very difficult for the company to maintain a long-term employment policy. In return, TMC has made great effort not only to maintain, but to also improve working conditions such as working hours, wages, and fringe benefits in order to provide a more satisfying working life for its employees. As an example of this, the standard working hours at TMC are 8 hours or 7 hours and 45 minutes. Most of the manufacturing plants operate on a continuous two shift system in which the first shift starts at 6:30am and finishes at 3:15pm, and the second shift starts at 4:15 pm and finishes at 1:00am. The manufacturing employees are rotated weekly from shift to shift. Basically, Saturdays and Sundays are holidays. In addition, all employees are provided with three fixed vacation periods of 10 days during the year. The regular wage consists of a basic wage, grade allowance, age allowance and productivity allowance. Overtime allowance, staggered work allowance and night work allowance are paid appropriately to each employee. In addition to every-monthly payment, bonuses are paid bi-annually, in summer and in winter. This bonus amount is determined by the company's business result and that of each employees performance.

In addition to the above, TMC has devoted itself to improving and maintaining comprehensive benefits programmes such as an employees savings plan, various insurance programmes and recreational facilities. These are means to establishing working and living conditions. Many of these working conditions are determined through discussion between the company and the Toyota Motor Workers Union, whose main role is to represent the employees to ensure that the employees opinions and concerns are reflected in actual working conditions.

## **5.11 INCREASING THE MOTIVATION OF EMPLOYEES**

The raising and maintaining of employees motivation is achieved through:

- fair appraisal and treatment
- communication



The fair appraisal and treatment concept is one in which the company has to fairly and impartially evaluate each employee's commitment, performance and his/her ability, and to then reflect these evaluation results through appropriate compensation. In other words, higher efforts are rewarded through higher compensation. TMC has an appraisal system which is applied to all employees in order to accurately and fairly grasp their performance level and competency. Further, appraisal results are not only utilized for determining each employee's wage, bonus and promotion but are used also for designing each employee's development plan. Communication is another important factor in raising and maintaining employee motivation. Optimum communication through providing information to all members and collecting their opinions or complaints about their working environment is beneficial to the company.

There are Human Resources systems such as "I. Time" and "Consultation System" which support the establishment of an organization which is communicating well. In "I. Time", managers or supervisors share at least one hour every month, outside of regular working hours, to discuss issues such as the company's business situation, production load and working conditions with their members. Also, all employees participate in a "Consultation System" in which they receive feedback from their respective managers or supervisors and discuss development plans for improving their future performance. The company also seeks other opportunities to communicate with its employees. For example, a monthly in-house newspaper called "Toyota Creation" is distributed to explain the company's current business environment and policies. "Human Resources News", is another newsletter reporting on personnel administration. It is distributed to supervisors who then have the responsibility to pass on the information to their group members.

In addition, the company and union recognize the importance of frequent communication and frank discussions. They hold several meetings throughout the year, such as a "Labour-Management Council" and a "Joint Labour-Management Round Table Conference".

Through these channels, the results of every meeting are accurately conveyed to all employees, both from the company and the union, by means of several media of communication. To date, various means of communication tools and methods have been discussed. However, the most fundamental and effective communication is that of the daily communication which takes place between supervisors and their members at the actual work sites. Supervisors are responsible for grasping their members ideas, and feelings and, at this same time, they play a critical role in providing necessary and accurate information regarding topics such as company business circumstances and the results of the discussions between the company and the union.

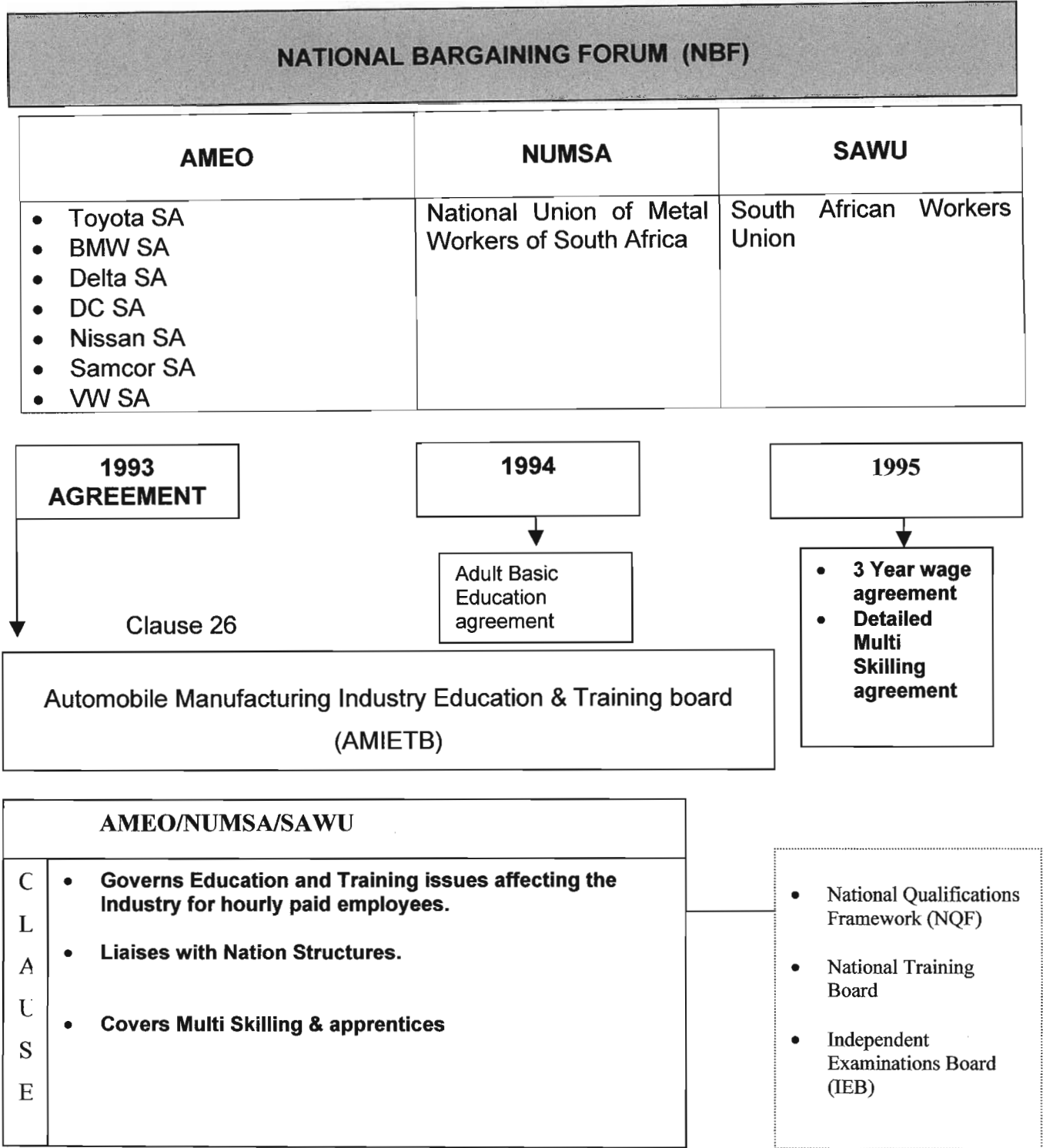
It is important to emphasise with reference to the overview provided above that the writer has chosen to tentatively discussed TMC Japan who is a World Class Manufacturer so as to highlight the important role played by Human Resource Management teams and the need for appropriate adjustments to suit the cultural and historical backgrounds and customs for each country.

My journey thus far was based solely on the management systems at TMC Japan, where this system clearly has been established over many many years, through the commitment of the company and its employees. It is also naturally influenced by the Japanese culture, mind and its unique working customs.

With this over view of how a World Class Automobile Manufacturer like TMC Japan functions in mind I will now re-focus attention on Toyota SA as a case study and continue to examine the impact made by the Multi-Skilling programme at that company.

Particular reference will be made to the adopted Multi-Skilling framework that was devised by Dr WP Pienaar and the training team. This has put Toyota SA as the forerunner of the Multi-Skilling programme within the seven Automobile Manufactures in South Africa.

**STRUCTURE**



**Figure 2**

It is apparent from this structure that representatives consisting of both the Automotive Industry Management, and the Union Management conform to decision-making clauses that govern the whole of the Motor Manufacturing Industry within South Africa. The clauses within the National Bargaining Forum are issues as listed.

- Parties
- Agreement
- Applicability of agreement
- Period of agreement
- Exemptions from agreement
- Bargaining fee
- Grading Structure
- Utilisation of Manpower
- Wage remuneration structure
- Wage increases
- Minimum rate of pay
- Ordinary hours of work
- Overtime
- Paid holidays
- Payment of overtime and for work on Sundays and Public holidays
- Service leave pay
- Year and gratuity
- Detentions and political imprisonment
- Maternity leave
- Paternity leave
- Productivity and job security
- Short time
- Separation allowance

- Temporary lay-off
- Automobile Manufacturing Industry Education and Training board (AMIETB)
- **Skills based grading, training and work organisation**
- Discrimination and segregation in education and training.
- Attendance allowance
- Pap smears
- Existing benefits
- Topics for discussion at plant level
- Other substantive issues
- Childcare
- General
- Benefit funds
- Interpretation dispute
- Entire agreement
- Signatures

Annexure A - Procedure when a Company's viability is threatened.

Annexure B - Hourly grades and titles.

Annexure C - Childcare guidelines

Annexure D - List of statistical data.

From the clauses listed above,

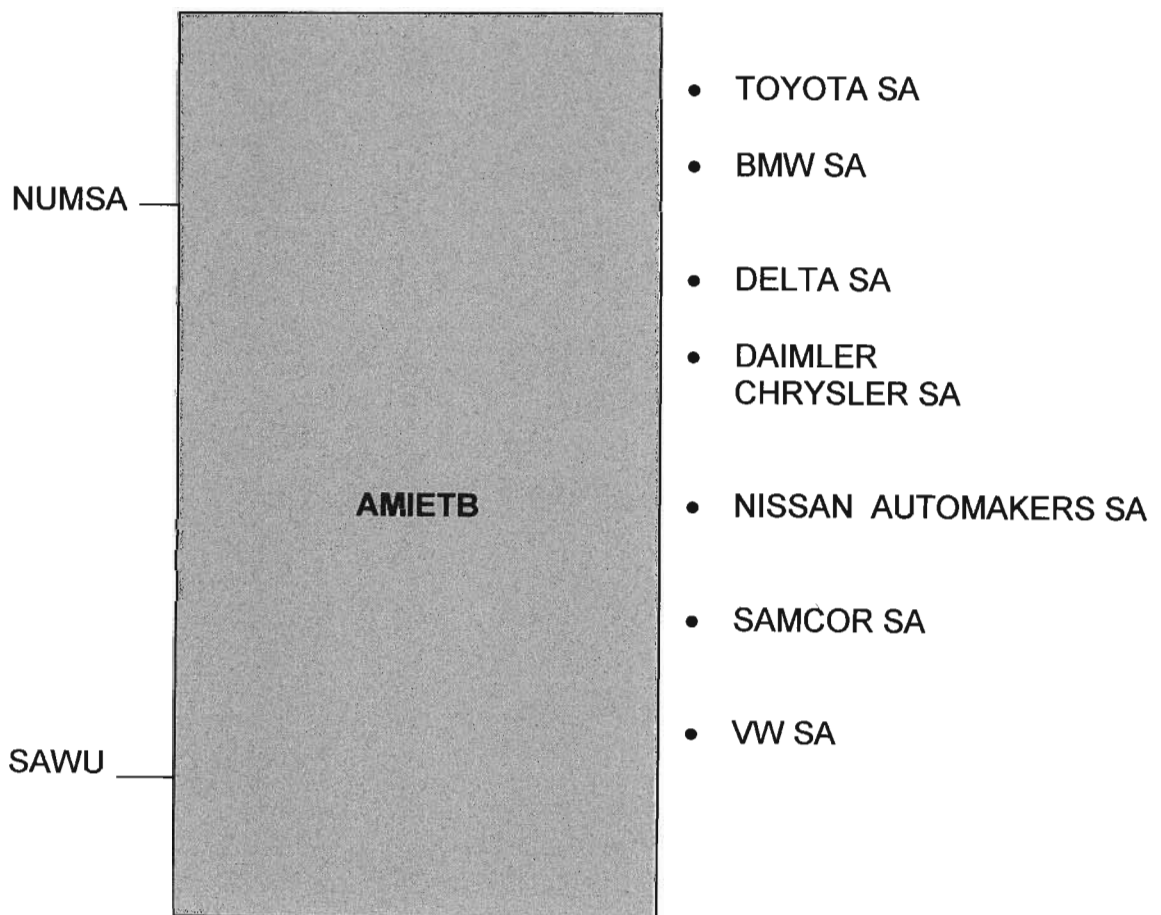
**“Clause 26” “Skills Based Grading, Training and Work Organisation”** was the clause that described an imperative link to the Multi-Skilling programme in chapter four. This imperative link would have given the reader a clear insight into this clause which will illuminate the chapters to follow.

At the NBF, the relevant participants developed broad guidelines, which were then filtered down to the respective controlling authorities. What was said as this agreement was entered into was, that because these guidelines are in fact broad,

there would be issues, like a **skills** based environment, rather than a **task** based environment. There would also be **recognition of prior learning (RPL.)** and **recognition of skills obtained and not for skills applied.** These were the types of issues prescribed in broad terms.

For the purpose of this case study one needs to note that guidelines for implementation had to be secured from the Automobile Industry Education and Training Board (AMIETB), which comprised both industry and Union Representatives. Figure (3) below graphically describes AMTIEB's structure.

### **AMIETB REPRESENTATION**

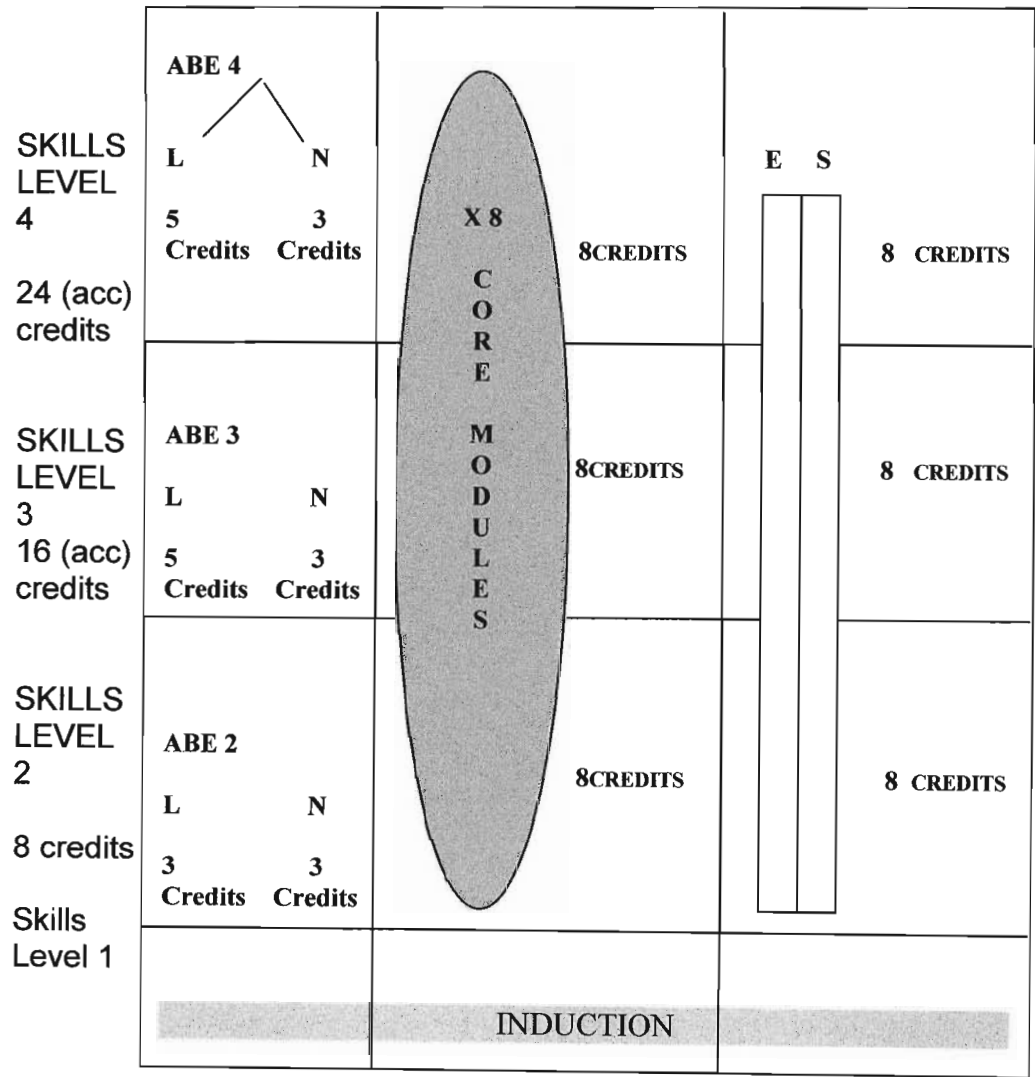


**Figure 3**

With the AMIETB structure firmly in place and representative of all role players as depicted in Figure 3 above, a National Framework was then drafted by the AMIETB Representatives to be used as a guide (see Figures 4 and 5 below) towards the foundationed model for Automobile Manufactures.

From this foundationed model the Automobile Manufactures were tasked through the Automotive Industry Education and Training Board to further develop their own framework, that would best suit their individual environments (see figure 6 below for TOYOTA SA Multi-Skilling framework model) which is the subject of this case study.

**NATIONAL FRAMEWORK**



**Figure 4**

## 5.12 NATIONAL STRUCTURE AS PART OF THE CASE STUDY

The National Structure that has been graphically described in figure 5 will be explained as follows:

The National Bargaining Forum is fully represented by Toyota SA, BMW SA, Delta SA, Daimler Chrysler SA, Nissan Automakers SA, Samcor SA, (who have recently become Ford SA) and Union representation comprising of NUMSA and SAWU. This forum then jointly negotiated the various clauses for the automobile manufacturing industry, for example:

- Hours of work
- Wages
- Benefits
- Maternity leave
- Education and
- Grading

The clause that is of relevance to the Multi-Skilling programme, is that clause of “Education and Training”. The Automobile Industry Education and Training Board (AMIETB) was then formed, again consisting of representatives from both the Automobile Manufacturers and Unions. This body then drafted the National Framework as graphically depicted in figure 4 above. The next task given by the AMIETB was for the individual Automotive Manufacturers to further develop their own specific in-house framework that would best suit their operational needs. Hence as indicated in figure 6 below, the “Toyota SA Framework”, which will be graphically displayed as the Toyota SA Multi-Skilling framework. This Toyota Multi-Skilling Framework will be explained in detail through this chapter as it forms the central thesis of this study.



So far the total breakdown, is represented as follows:

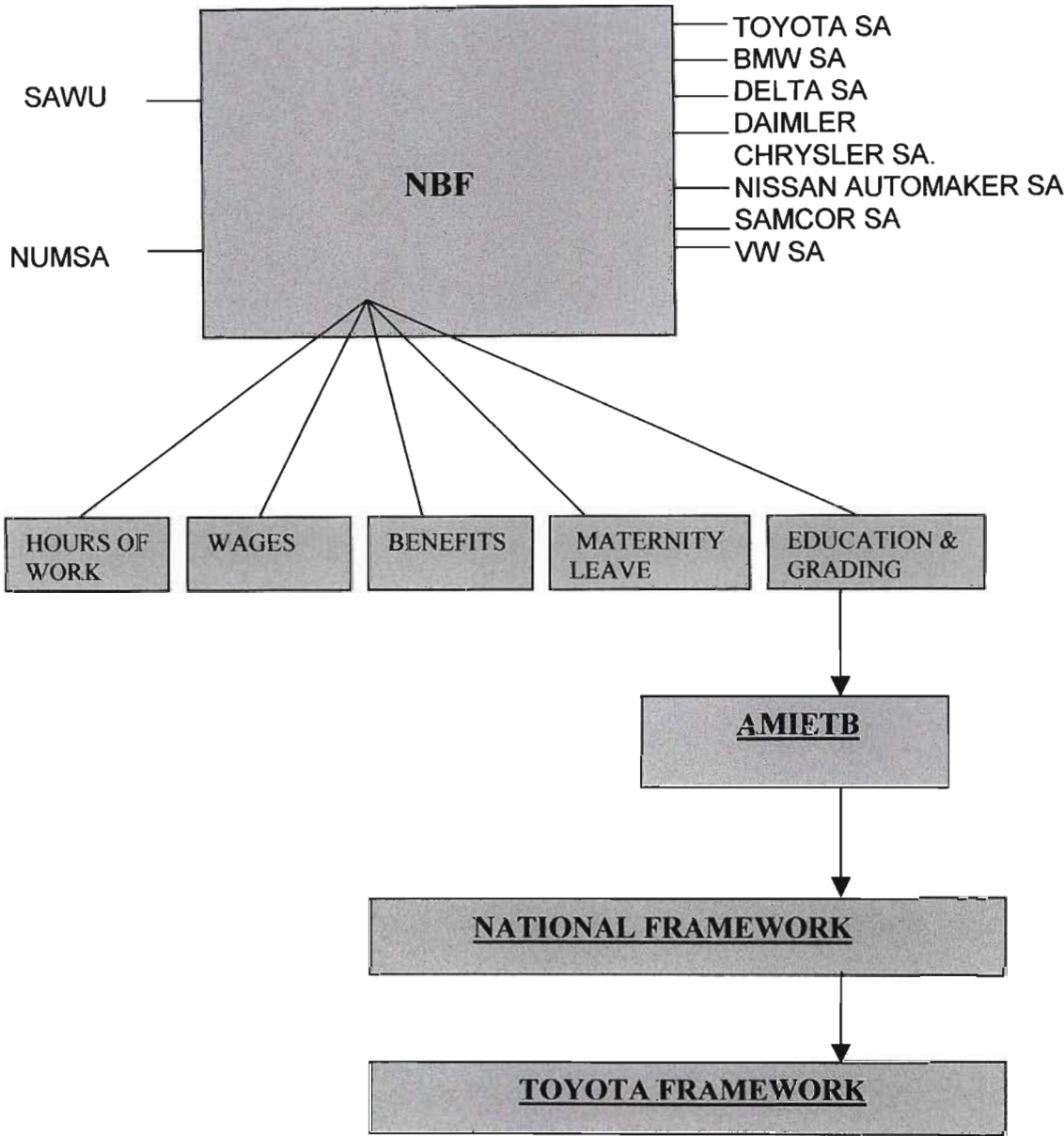
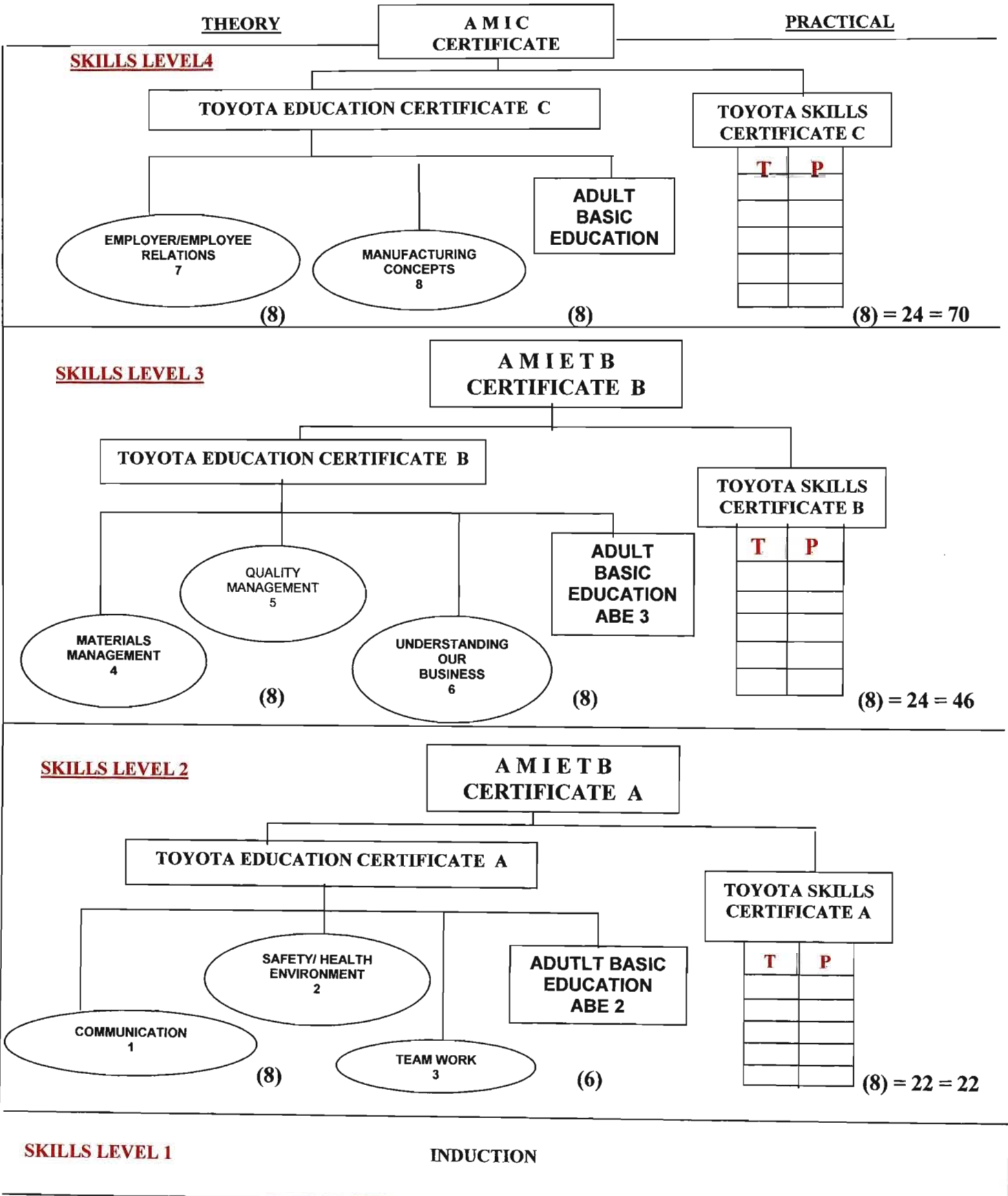


Figure 5

FIGURE 6 - MULTI-SKILLING FRAMEWORK - TOYOTA SA SPECIFIC

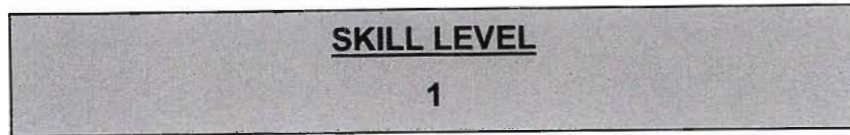


MINIMUM ROUTE

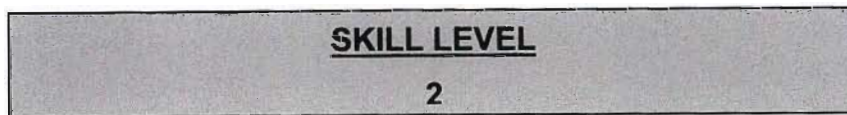


MAXIMUM ROUTE

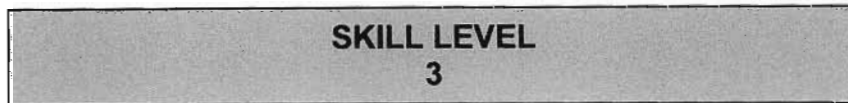
Within the National agreement, it was specified that the Multi-Skilling should consist of the following four Skill levels, as displayed in figure 4. These will be explained as follows:



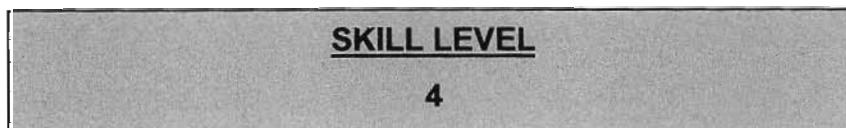
- Skill level one “Induction”, which is equal to hourly grade one. (This is where the wages and the skills are in direct line with each other, and where the terminology of Education and Grading is formed because of the direct link to an Employees grade)



- Skill level two, which is equal to hourly grade two



- Skill level 3 which is equal to hourly grade three



- Skill level four which is equal to hourly grade four

These four skill levels indicate a clear career path for the employees who would enter onto the Multi-Skilling programme.

There after, three main components namely, the education component, knowledge component and the skills component were then added to the Multi-Skilling framework as shown in Figure 7. These components will be explained individually.

**COMPONENT STRUCTURE**

	EDUCATION COMPONENT	KNOWLEDGE COMPONENT	SKILLS COMPONENT
Skill Level 4			
Skill Level 3			
Skill Level 2			
Skill Level 1	INDUCTION		

**Figure 7**

### 5.13 THE EDUCATION COMPONENT

It was agreed at national level that Adult Basic Education (ABE) would be slotted into this framework as follows:

1. Adult Basic Education 2, slotted into level 2
2. Adult basic Education 3, slotted into level 3
3. Adult basic Education 4, slotted into level 4

	EDUCATION	KNOWLEDGE	SKILLS
Skill Level 4	<b>ABE 4</b>		
Skill Level 3	<b>ABE 3</b>		
Skill Level 2	<b>ABE 2</b>		
Skill Level 1			

**Note:**

The Adult Basic Education per level will consist of: -

- |          |     |          |
|----------|-----|----------|
| Part one | i)  | Literacy |
| Part two | ii) | Numeracy |

**Figure 8**

Then the following credit values for the Education component, Knowledge component, and the Skills component were added to levels 2, 3 and level 4.

Credit Structure

	EDUCATION	CREDITS	KNOWLEDGE	CREDITS	SKILLS		CREDITS
					T	P	
SKILL LEVEL 4	ABE 4	8		8			8
SKILL LEVEL 3	ABE 3	8		8			8
SKILL LEVEL 2	ABE 2	6		8			8
SKILL LEVEL 1	INDUCTION						

Figure 9

- a) Level 2 equals - Literacy = 3x credits  
Numeracy = 3x credits
- b) Level 3 equals - Literacy = 5x credits  
Numeracy = 3x credits
- c) Level 4 equals - Literacy = 5x credits  
Numeracy = 3x credits

### **5.13.1 Adult Basic Education within the Toyota SA Multi-Skilling Framework**

Employees who have a standard of Education lower than a matriculation certificate, and who wish to improve their education in both literacy and numeracy may do so at their own request.

At present, lessons for Levels 1 to 3 are facilitated by teachers from Operation Upgrade Workplace Unit (an organisation established to improve basic standards of education). Operation Upgrade Workplace Unit is an organisation that provides adult basic education for reconstruction and development for employees who would like to improve their education in;

- Mother tongue communication
- English second language level 1
- English second language level 2
- English second language level 3
- English level 4
- Numeracy level 2
- Mathematics level 4

The ABET level 4 is provided by an organisation, “A Secondary Education Curriculum for Adults (ASECA)”, who for adult learners will,

- Provide learners with the opportunity to access the General Education Training Certificate (GETC) and the Further Education and Training certification (FETC).
- Help learners to acquire life long learning.
- Help learners toward economic, academic, professional and self-upliftment.

The courses offered by ASECA at GETC level,

- English – Communication, Language and Literature
- Combined Mathematics
- Inter-grated Social Studies

- Combine Sciences

At FETC level,

- English – communication, Language and Literature
- Combined Mathematics which is both modular and additive and comprises:
- Intermediate Mathematics that is equivalent to functional standard grade Mathematics.
- ASECA Mathematics that is equivalent to standard grade Mathematics.
- Advanced Mathematics that is equivalent to higher grade Mathematics.
- Natural Sciences intergrated Social Sciences

Further encouragement was given to employees for to improve their education when the Motor Industry agreed to pay those employees attending after hour classes for 50% of the recorded hours of education. (Overtime rates do not apply here). Tuition, books and stationary are provided free of cost to the learners.

Employees who wish to join these classes will need first to undergo an assessment in order to establish their current levels of both literacy and numeracy. This assessment is not a pass or fail examination, but takes into account the employees previous standard of education, the quality of previous schooling and things either learned or forgotten since leaving school. This assessment is carried out to find the most practical point at which the employee would begin to start studying again.

The lessons provided within the Toyota Group of Company's are: -

- |         |   |                  |
|---------|---|------------------|
| • ABE 1 | - | Zulu literacy    |
| • ABE 2 | - | English literacy |
| • ABE 2 | - | Numeracy         |
| • ABE 3 | - | English literacy |
| • ABE 3 | - | Numeracy         |



Further where it is necessary, transport is provided to and from other divisions, for example,

- i) Toyota Stamping division (TSD)
- ii) Toyota automotive components (TAC A + B)

These divisions are situated some distance from TSM. Recorded registered times of study are for 2 hours, between 15:30 AND 17:30.

\* **ABE Level 4** – Literacy and numeracy are self study (or distance learning) courses, although limited tuition will be made available for those employees who require tuition.

Further, by adding Intergrated Science and Social Science to the employees ABE level 4 Literacy and numeracy, the learner would then qualify for the General Education Training Certificate which would be recognised by the NATIONAL Qualifications framework (NQF).

**5.14 THE KNOWLEDGE COMPONENT**

Certain generic components were then identified, and in total there are 8 generalised knowledge core modules, that every employee on hourly grade must become familiar with, in the Manufacturing Operations environment at the operative level. These knowledge core modules are recognized nationally between the seven automobile manufacturers. They are:

**CORE MODULES**

MODULE NO.	CORE MODULE	STUDY HRS	NOTIONAL CREDITS
C1	Health & Safety	40	4
C2	Employer/Employee Relations	14	1.4
C3	Communication Parts 1 & 2	20	2
C4	Manufacturing Concepts	48	4.8
C5	Material Management	8	0.8
C6	Team Work	40	4
C7	Understanding our business	30	3
C8	Quality Management	40	4

**Figure 10**

The above 8 core Modules laid out in (figure 10) above are then covered by the Employee through his/her horizontal progression within the framework of Levels 2, 3 and 4.

#### 5.14.1 IN SKILLS LEVEL 2

In skill level 2, the associated core modules that the employees must cover are:  
(see figure 11)

##### CORE MODULES (LEVEL 2)

MODULE NUMBER	CORE MODULE	HOURS	CREDIT VALUE	PAID HOURS	RECOMMENDED ABE LEVEL
C1	Health & Safety	40	4	20	ABE 2
C3	Communication Parts 1 & 2	20	2	10	ABE 2
C6	Team Work	40	4	20	ABE 2

Figure 11

#### 5.14.2 IN SKILLS LEVEL 3

In skill level 3 the associated core modules that the employees must cover are:  
(see figure 12) below.

##### CORE MODULES (LEVEL 3)

MODULE NUMBER	CORE MODULE	HOURS	CREDIT VALUE	PAID HOURS	RECOMMENDED ABE LEVEL
C5	Materials Management	8	0.8	4	ABE 3
C7	Understanding Our Business	30	3	15	ABE 3
C8	Quality Management	40	4	20	ABE 3

Figure 12

5.14.3 IN SKILLS LEVEL 4

In skill level 4, the associated core modules that the employees must cover are:  
(see figure 13) below.

CORE MODUELS (LEVEL 4)

MODULE NUMBER	CORE MODULE	HOURS	CREDIT VALUE	PAID HOURS	RECOMMENDED ABE LEVEL
C2	Employer /Employee Relations	14	1.4	7	ABE 4
C4	Manufacturing Concepts	48	4.8	24	ABE 4

Figure 13

Levels 1,2,3 and 4 are represented in figure 14 below, indicating the Education, knowledge and skill components with the credit values of the Multi-Skilling programme as tabled at Toyota SA, in totality.

MULTI-SKILLING PROGRAMME

SKILL LEVEL	EDUCATION	CREDITS	KNOWLEDGE	CREDITS	SKILLS		CREDITS	CREDITS
4	ABE 4	8	<div>C4C2</div>	8	T	P	8	MAX 70
3	ABE 3	8	<div>C5C8C7</div>	8	T	P	8	MAX 46
2	ABE 2	6	<div>C6C1C3</div>	8	T	P	8	MAX 22
1	INDUCTION							

MINIMUM  
ROUTE

MAXIMUM  
ROUTE

Figure 14

There are three scheduled options for studying these modules.

a) Self Study

Copies of the modules will be made available on request for any employee who has a valid matric certificate.

b) Limited Tuition

Self study with tutorial assistance on request.

c) **Full Time Tuition**

Full time tuition given in a classroom environment, does only refer to the fulltime learners. Upon completion of their studies, the employee will then be tested. The test will be scheduled for a 1hr session. (As with ABE the company will pay 50% of the allocated hours for the subject registered by the employee). However, because of the various ways of study, it has been agreed that the amounts will be paid as one amount per module upon successful completion of that module by the employee.

In the event of an employee failing a particular core module, the employee is then permitted to apply for a retest, but this will only be granted after further tuition.

## **5.15 THE SKILLS COMPONENT**

The main streams identified in 4.19.1 below are the streams associated within the Automobile Manufacturing Operations. The motor vehicle skills are associated with these areas of expertise.

### **5.15.1 Main Stream**

- Paint shop
- Body Shop
- Trim Manufacture
- Engine assembly
- Engine Machining
- Supervision Assembly
- Vehicle Assembly
- Truck Assembly
- Automotive Plastics
- Components
- Warehousing Stamping & Press Operations

**5.12.2 Odds & Sods** (is the terminology used by Toyota SA for people in various areas of work other than the main streams listed above in 5.15.1)

- Tool & Die Manufacturing
- Cleaners
- Security
- Box bodies

**5.16 CREDITS PER IDENTIFIED MAIN STREAM**

Fortunately, the Automotive Motor Manufacturers of South Africa were in a position to purchase materials directly from the Australian Motor Manufacturers. These materials were in the form of workbooks cover most of the main stream areas. With the exception of workbook materials for areas highlighted as odds & sods, that is the areas of tool & die manufacturing, cleaners, security and box bodies. However these purchased materials are not catergorised per level which is problematic for the South African Automotive Manufacturing Industry.

- One of the main streams, “Paint shop Stream” had 30 credits.
- Body Shop Stream had 29 credits.
- Suspension Assembly had 37 credits
- Warehousing Stream had 16 credits
- Trim Manufacture had 26 credits

Figure 15 below shows the allocation of credits to five of the main stream processes as obtained from the Australian materials. Obviously, if this type of credit system was in place based on the Australian layout, employees would if allowed to, select the stream with the highest credit values. This means they would be able to obtain their AMIC certificate in a shorter period of time, than that of an employee who had to follow a stream with a lot more credit value.

### **5.17 THE AUSTRALIAN MODEL LAYOUT**

This Australian model (in figure 15 below) depicts how the Australian Motor Manufacturers have allocated uneven credit values per stream. (This was not accepted to be of good practice within the Automobile Manufacturers of South Africa).





MAIN STREAM LAYOUT

DIVISION	STREAM	CREDITS
TSM	Paint Shop	24 credits
TSM	Body Shop	24 credits
TSM	Trim Manufacture	24 credits
TSM	Engine Assembly	24 credits
TSM	Engine Machinery	24 credits
TSM	Supervision Assembly	24 credits
TSM	Vehicle Assembly	24 credits
TSM	Truck Assembly	24 credits
TSM	Automotive Plastics	24 credits
TAC A + B	Components	24 credits
TSM	Warehousing	24 credits
TSD	Stamping & Press Operations	24 credits

Figure 16

The valued credits were then selected with the help and guidance of line management. In other words, the line management consisted of team leaders, supervisors and section managers who had the main say as to which credits had to be placed where and which area/credits were more complex. The line management team also categorized these credits into priority listings, and it was then divided into skills.

**5.18 THE SKILL CONSISTS OF TWO PARTS**

- a) The **Ss**, which are the **skill**
- b) The **Es**, which are the **electives** (theory).

**SKILL LAYOUT**

			SKILLS	
Skill Level 4			S	E
Skill Level 3				
Skill Level 2				
Skill Level 1	INDUCTION			

**Figure 17**

### 5.18.1 A Practical Example

If an employee spray paints a car body, then the physical action associated here, is the “S” component which equals the skill.

If, however, the paint starts to run down the body of the vehicle whilst the employee is spray painting the vehicle, the employee spray painter must then have the knowledge that,

a) The mixture is too thin

OR

b) the spray-gun setting needs to be altered.

The employee must be in a position then to make the necessary changes in the technique. This is the “E” component which equals the knowledge about the skill).

Certificates were then allocated to these skill levels. (Figure 18 above shows the certification advancement).

Where the model indicates the AMIETB certificate2, this is indicative that the employee has successfully completed the ABET 2, core modules C1/C3/C6, the employee now obtains the Toyota Education Certificate 2, as well the employee has successfully completed the skills training associated with the level 2, the employee also receives the Toyota skills certificate 2. The employee, once in position of both the Toyota Education Certificate 2 and the Toyota Skills Certificate 2 would then be presented with the AMIETB certificate 2.

Once the employee is in possession of the AMIETB Certificate 2, he/she would then be in a position to start on to level 3, Core Modules C5/C7/C8, in order to obtain the Toyota Education Certificate 3, then continue to complete the Skills Training associated with the level 3. Once the employee has completed the skills training for level 3 he/she would then be presented with the Toyota Skills Certificate 3. The employee, once in possession of both the Toyota education

certificate 3 and the Toyota Skills Certificate 3, would then be presented with the AMIETB certificate 3.

To move on to level 4, the employee would then complete the ABET 4, Core Modules C4/C2 and the associated skills with level 4. Once this is completed, the employee would be credited with 24 credits, enabling him/her to then qualify for the Automobile Manufacturing Industry Certificate, (AMIC Certificate). See figure 18 below.

CERTIFICATION MODEL

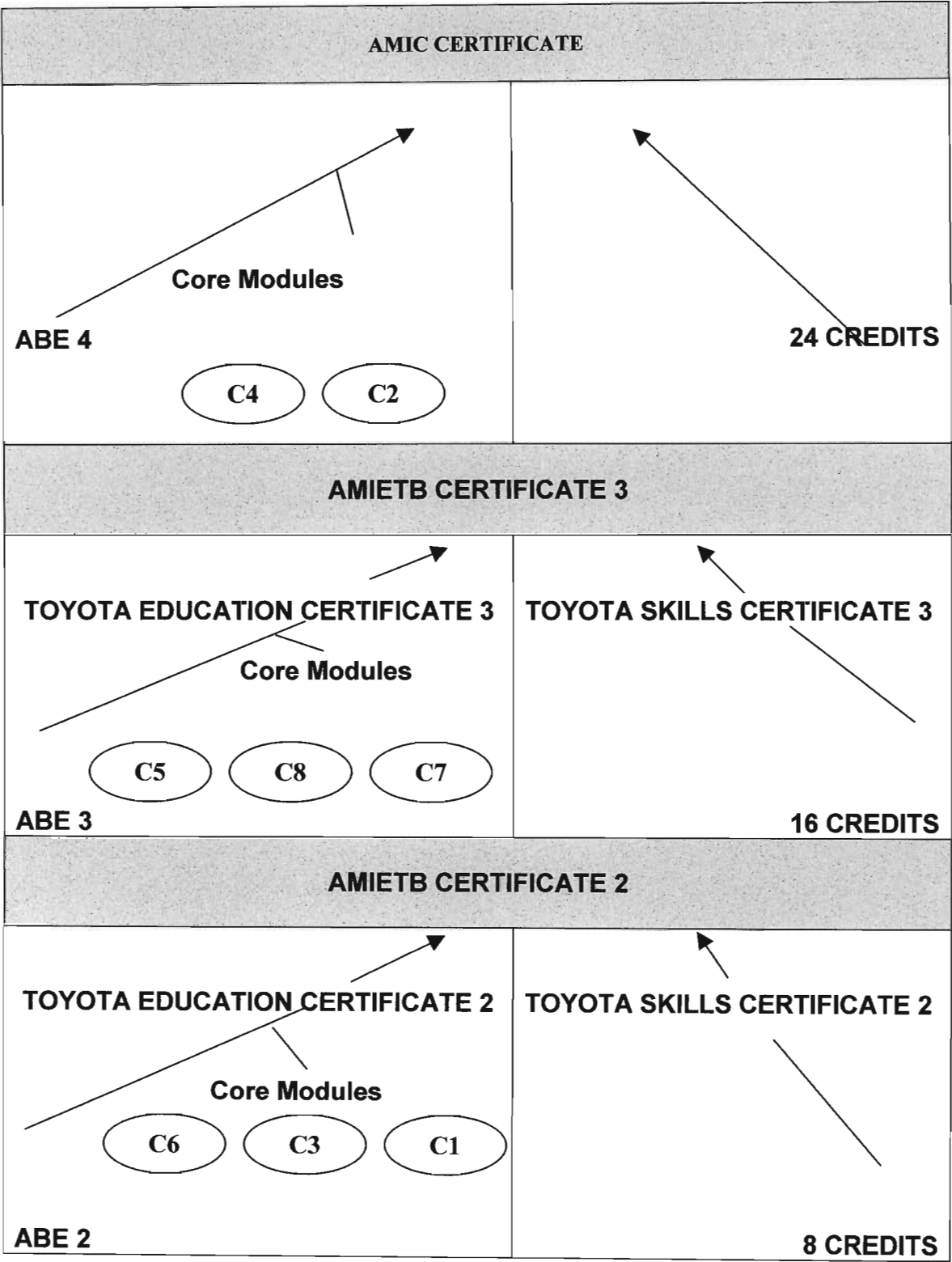


Figure 18

This was done to allow the Employee Recognition for skills obtained per level. (In view of the South African Market, for example, in 1993). At that time, the seven Motor Manufacturers of South Africa – already listed - still had the monopoly within the South African Market. Then, suddenly, the market was opened to external exporters and the variety choice of motor vehicles immediately went up from 7 x Auto Manufactures specific models of motor vehicles, to around 40 x different makes of Motor vehicles. As a result of this competition for the market, there was the possibility of retrenchments within the 7 x Automotive Manufacturers in South Africa.

Toyota SAs strategy in implementing these skills certificates to accredited employees means that employees would certainly have an advantage over retrenchees, who were **not** in a possession of a skills certificate. Moreover, should an employee wish to take up employment with one of the other Motor Manufacturers, s/he would certainly be recognized, as marketable because s/he is in possession of a skills certificate.

## **5.19 RECOGNITION OF PRIOR LEARNING**

With the Toyota SA Framework model successfully in place, the next level of concentration was the so-called Recognition of Prior Learning (RPL) exercise. At this stage there was pressure from the Unions, who claimed that Toyota SA were not paying for any additional skills that the employees had. An exercise then began to evaluate each and every hourly graded employee of Toyota SA. In the case of Toyota SA, there were a total of 6,000 employees that had to be subjected to the RPL assessment, that is to evaluate them in terms of the skills that they already possessed, and then to place them within the recognized framework.

In order to accomplish this RPL exercise, the skills per specific area had to first be identified, and valued credits then attached to these skills (that is 8 credits per skills level). These credits were valued as one training hour, was equal to 0,1 credit.

(1 x training hour = 0,1 credit). In other words, 10 x notional training hours = 1 credit

The completed programme was allocated the total of 70 credits as shown in the diagram figure 19 below.

### MULTI-SKILLING PROGRAMME CREDIT VALUES

	EDUCATION	KNOWLEDGE	SKILLS
	SCHOOLING	CORE	PRACTICAL
LEVEL 4	<b>ABE 4</b> <b>L</b> <b>N</b> <b>5</b> <b>3</b>	a) <b>Employee/Employer Relationships</b> b) <b>Manufacturing concepts</b> c) <b>Business Skills 2</b>	<b>ON JOB</b>
	<b>Credits 8</b> <b>Acc 22</b>	<b>Credits 8</b> <b>Acc 24</b>	<b>Credits 8</b> <b>Acc 24</b>
LEVEL 3	<b>ABE 3</b> <b>L</b> <b>N</b> <b>5</b> <b>3</b>	d) <b>Materials Management</b> e) <b>Understanding our Business</b> f) <b>Quality Management</b>	<b>ON JOB</b>
	<b>Credits 8</b> <b>Acc 14</b>	<b>Credits 8</b> <b>Acc 16</b>	<b>Credits 8</b> <b>Acc 16</b>
LEVEL 2	<b>ABE 2</b> <b>L</b> <b>N</b> <b>3</b> <b>3</b>	g) <b>Communication</b> h) <b>Team Work</b> i) <b>Safety &amp; Health Environment</b>	<b>ON JOB</b>
	<b>Credits 6</b>	<b>Credits 8</b>	<b>Credits 8</b>

Figure 19



(Estimation of the training hours was made using the hours indicated in figure 15 of the Australian materials. For the purpose of credit values, Toyota SA Training worked the out credit values for the Toyota SA Framework from these recorded Australian hours).

With the framework in place and with the credit values attached, each employee was "RPLed."

### 5.19.1 AN EXAMPLE OF THIS PROCESS FOLLOWS.

The Employees education (schooling), knowledge (core) and skills (practical) were assessed per level. The employee, after assessment for example, might end up with one skill at level 2, knowledge of something at level 3 and might have 2 more skills at level 4. (The **administration** of this exercise was difficult to capture, but will be discussed further on). Then, when the employees credits were added for example, he might end up with 17 credits in total and, with these being 17 credits i.e. between 16 and 24 credits, it means that the employee therefore would be placed onto skill level 3.

If the employee is already on skill level 3, then everyone is satisfied, that is, the employee, Human Resources the Union and the Training Department

If the employees assessment comes out at skill level 3, and he is presently being paid at a skill level 4 rate of pay, his salary would **not** be reduced.

However, if the employee is currently on skill level 2 and he is assessed to be at a skill level 3 position, his salary would **then** immediately be up-graded, to level 3.

This exercise was completed for all of the 6 000 employees, and proved to be a costly exercise for the company in terms of resources and financially.



Although the initial outlay by Toyota SA to cover this RPL exercise, was costly, I will describe its importance, through examples, showing how these costs were outweighed by the benefits.

Within Toyota SA, there are 2 x main feeder lines, one for the cars, and one for the bakkies. The understanding of the work force/employees employed on these two feeder lines is that they would only work on their respective lines. If, for example, at the start of a Monday morning, when production starts up there are 2 or 3 employees absent from the spray section of the bakkie line and on the other car feeder line, spray section all the employees are present, employees from the car spray section - although they do exactly the same type of task - will not move over to the bakkie spray section in order to balance the two main feeder lines so that production can flow smoothly.

The employees are also covered by their job descriptions so these employees can, in fact, refuse to cover the other line. Should this happen, and one of the main feeder lines have a stoppage, it has a ripple effect from the stamping division, where the body parts are pressed through the complete build up manufacturing process of a vehicle, which results in a major loss of car sales.

Subsequent to Multi-skilling, whereby these employees are now trained, and are paid at a skills level 4, if a line stoppage is declared employees can be interchanged, professionally, and willingly. By preventing a costly line stoppage, it is then worth the company's outlay, for training and salary costs incurred in the Multi-Skilling programme.

At the outset of the Multi-Skilling programme, the employees are clearly made to understand, **"You are utilized where you are needed the most."** The benefits to the company from this Multiskilling programme will undoubtedly be higher flexibility of the employees. So far nobody has had a problem with this.

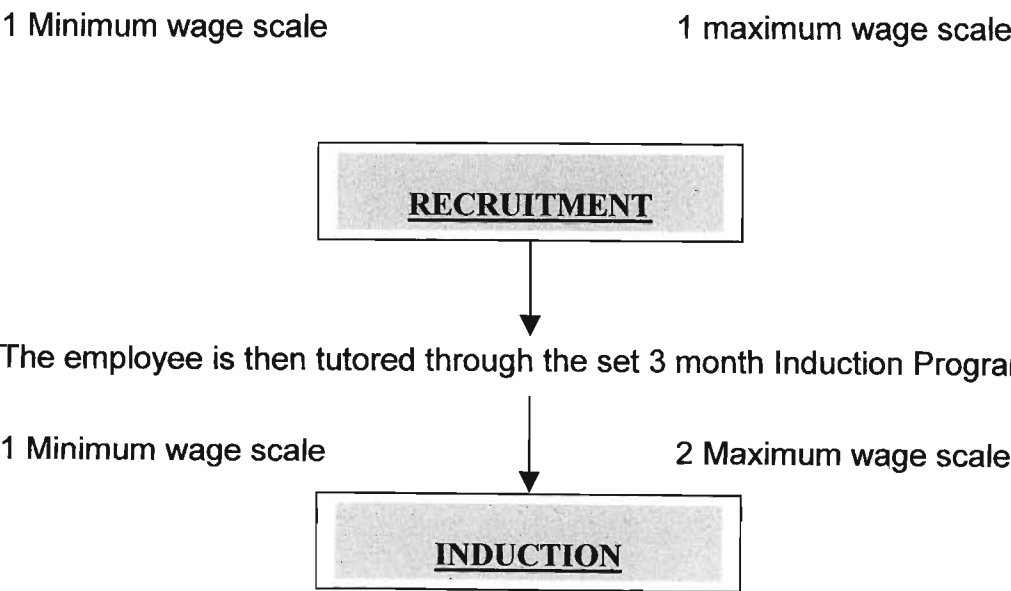
**5.20 THE COUPLING OF THE MULTI SKILLING PROGRAMME TO WAGES** (Automatic movement)

The wage structure/scales are determined by the NBF - that is the minimum and maximum wage scale - with relevance to the Motor Manufacturing Industry.

To begin with employees wages are reflected at different levels, even though they might be effectively carrying out the same skill. This maybe because the employee is receiving merit increases through his employment history. The aim with the Multi-Skilling programme is to place employees onto a minimum and a maximum wage scale, **with nothing in between**, that is a set rate of pay on the minimum wage scale and a set rate of pay on the maximum wage scale.

**5.21 NEW EMPLOYEES APPOINTED**

All new employees are appointed on the minimum of level one.



The Induction Programme will ensure that the new employee reaches the workplace reasonably well informed.

### **5.21.1 Part One**

Part one of the training consists of a two weeks together set programme at the Albert Wessels Training Centre (AWTC). This training covers:

- Attendance of Access Control in and out of the workplace
- Hours of work and leave entitlements
- Pay procedures and overtime
- Discipline and grievances
- Occupational Health and Safety Act
- Workmans Compensation Act
- Medical Aid
- Employee Assistance Programme (EAP)
- Pension and Provident funds
- Housing
- Education and Multi-Skilling
- Basic Hand Tools Training

### **5.21.2 Part Two**

Is on-the-job/line induction and comprises: -

- The issuing of all necessary gear and safety equipment
- Safety training specific to the line/department.
- Tour of the plant/line with an introduction to the team leader, immediate colleagues, and the on the job trainer.

- Explanation to the new employee of his rights and duties; reporting procedures and arrangements regarding tea and lunch breaks, starting times etc.
- Explanation in respect of expectations regarding output and behaviour.
- Operational training on the first workstation.

**NOTE:**

A new employee on the induction programme will be paid at a Skills Level 1 minimum rate of pay. After the 3 months on-the-job training, the employees performance will be evaluated by a task team and if found to be competent his/her rate of pay will be increased to skill Level 1 Maximum.

In the event of failure, the employee can be re-evaluated twice more at one-month intervals, during which time he/she must have further coaching to rectify his/her weaknesses. If after this time his/her performance is not acceptable, he/she would be referred to the Human Resources Department.

**This process is shown in Figure 20 (below)**

INDUCTION PROGRAMME PROCESS

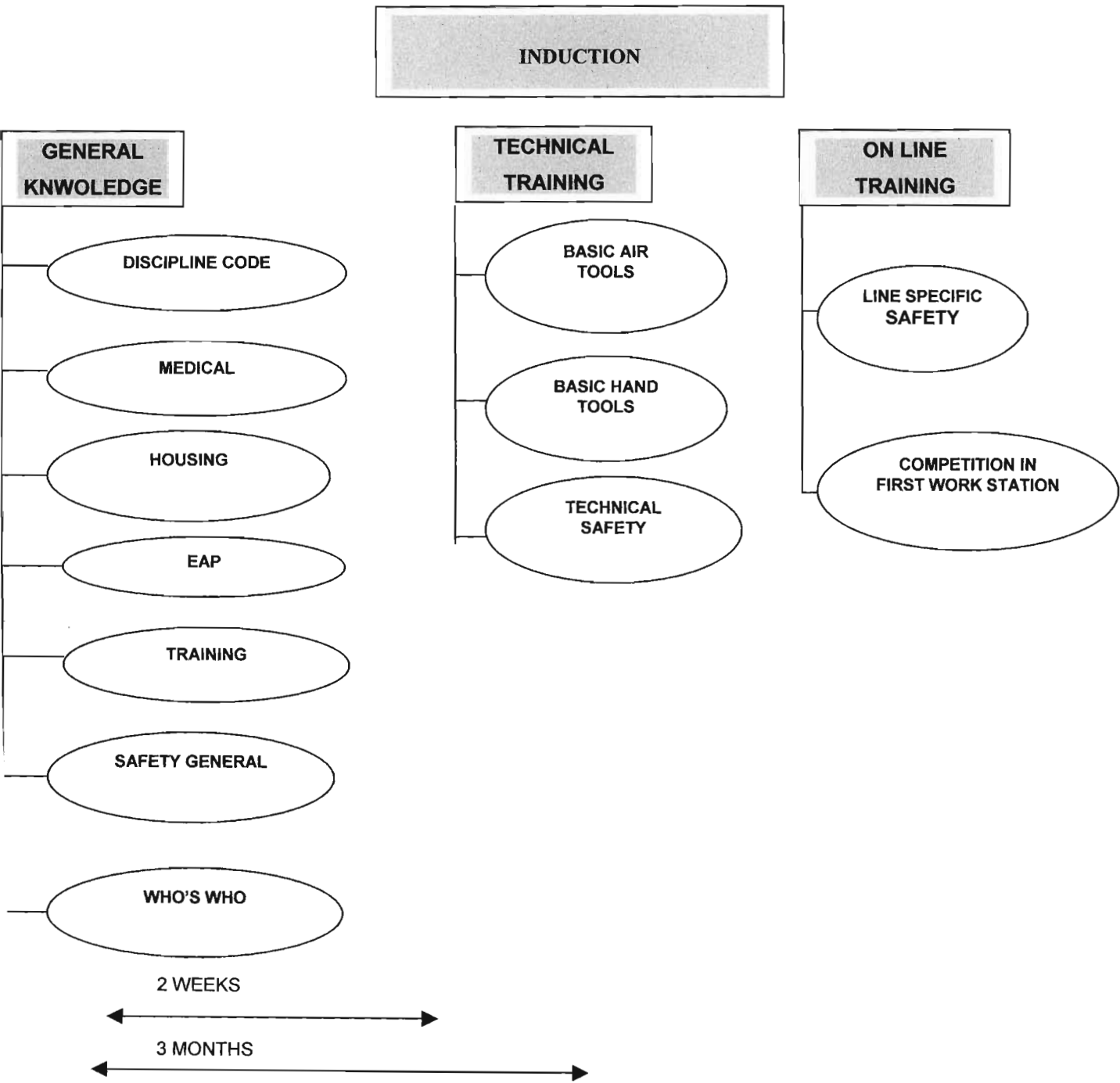


Figure 20

Should the employee pass his 3 months Induction Training, then his wages are automatically moved onto the maximum of Skill Level 1.

Once the employee is then at the maximum of skill Level 1, he has effectively three routes from which to choose to begin his career path. He can continue with either:

- Adult Basic Education
- Core Modules
  - C1 Health & Safety
  - C2 Employer/Employee Relations
  - C3 Communication Parts 1 & 2
  - C4 Manufacturing Concepts
  - C5 Material Management
  - C6 Team Work
  - C7 Understanding our Business
  - C8 Quality Management

(See figure 10 above)

- Skills training

Once Skill level 1 modules have been successfully completed, the employee can choose to progress to Skill Level 2, then to Skills level 3 and finally onto Skill level 4.

Through this progression from Skill level 1 through to Skill Level 4, the movement of the employee is automatic and **not** vacancy driven. In other words, the employee can choose to move from Skill Level 1 through to Skill Level 4.

The reverse side of Multi-Skilling is, if the employees achieve all the credits they will move upwards but if they do not have all the credits they will stay where they are until the credits are acquired. Employees who are **not** participating in the Multi-Skilling programme will have the opportunity to progress but only under certain conditions.

Those employees who advance by the acquisition of skills, but without the **necessary education** will progress along the **minimum** route. The rate of pay will be the minimum for the skill level of the permanent position.

In the event that a permanent position becomes vacant, the position will be advertised throughout the group, specifying the Multi-Skilling requirement **skill level and stream** as well as any other special skills requirement.

Any employee who has the necessary AMIETB Certificate (**maximum route**) may be placed into that particular position. If no suitably qualified employee is available, then persons with the necessary skill certificate will be allowed to apply. In such a case, applicants will be assessed for their skills and knowledge. The best candidate would then be selected and appointed on the appropriate skill level (**minimum route**) if considered to be competent in the position. If the competency however, is considered to be less than required, the candidate will remain on his/her current skill and wage level whilst at the same time undergoing an accelerated training programme. After one month the candidate is re-assessed and in the event of failure to achieve the required skill level, he/she is provided 2 opportunities, one month apart, to attempt further assessment.

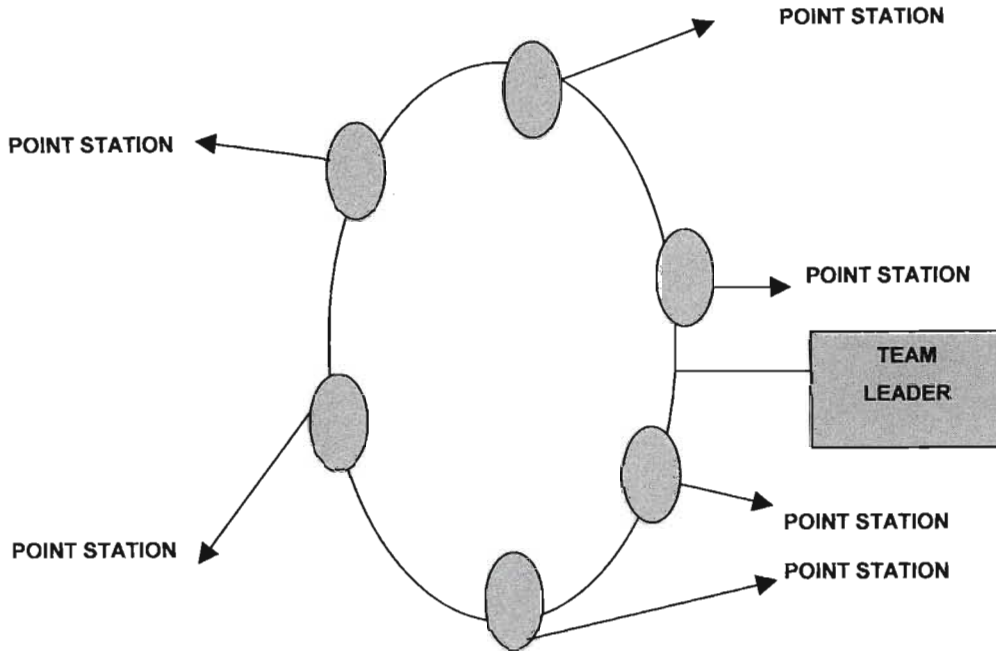
## 5.22 ROTATIONAL TRAINING

An employee may be used on a temporary basis while the selection procedure is being carried out provided it is clearly understood and in writing.

For example - the **Body Shop Stream**.

In the “Body Shop Stream”, there are 6 x workers (refer to diagramme) and the team leader.

### ROTATIONAL TRAINING (SINGLE POINT STATION)



**Figure 21**

You will find teams setup like this, within the Body Shop Stream.

The above diagramme (Figure 21) will be explained as follows: The main stream will be made up of area sections like above with a Team Leader controlling 6 workers who are each responsible for a point station. Each point station represents a critical component to be fitted to a motor vehicle, and this point station is manned by an employee who is competent to fit these components.

The Team Leaders in each group all have to be at skills level 4 with a matric certificate).

Within these teams, the 6 employees will be rotated, under the guidance of their Team Leader and Area supervisor until each employee - per team - can function correctly to both quality standards and tact time (note, the tact time, represents



the allowed time for an employee to fit a component to a vehicle) at any Point Station of the team location. That is, they have the necessary skills.

Once all the six team employees are conversant with their six respective point stations, the second rotational phase of training will commence. A team member from one team will swap with another team member from another team within the Body Shop (as shown below in figure 22) thus acquiring further experience in implementing his/her newly acquired skills and demonstrating flexibility.

ROTATIONAL TRAINING (DOUBLE POINT STATION)

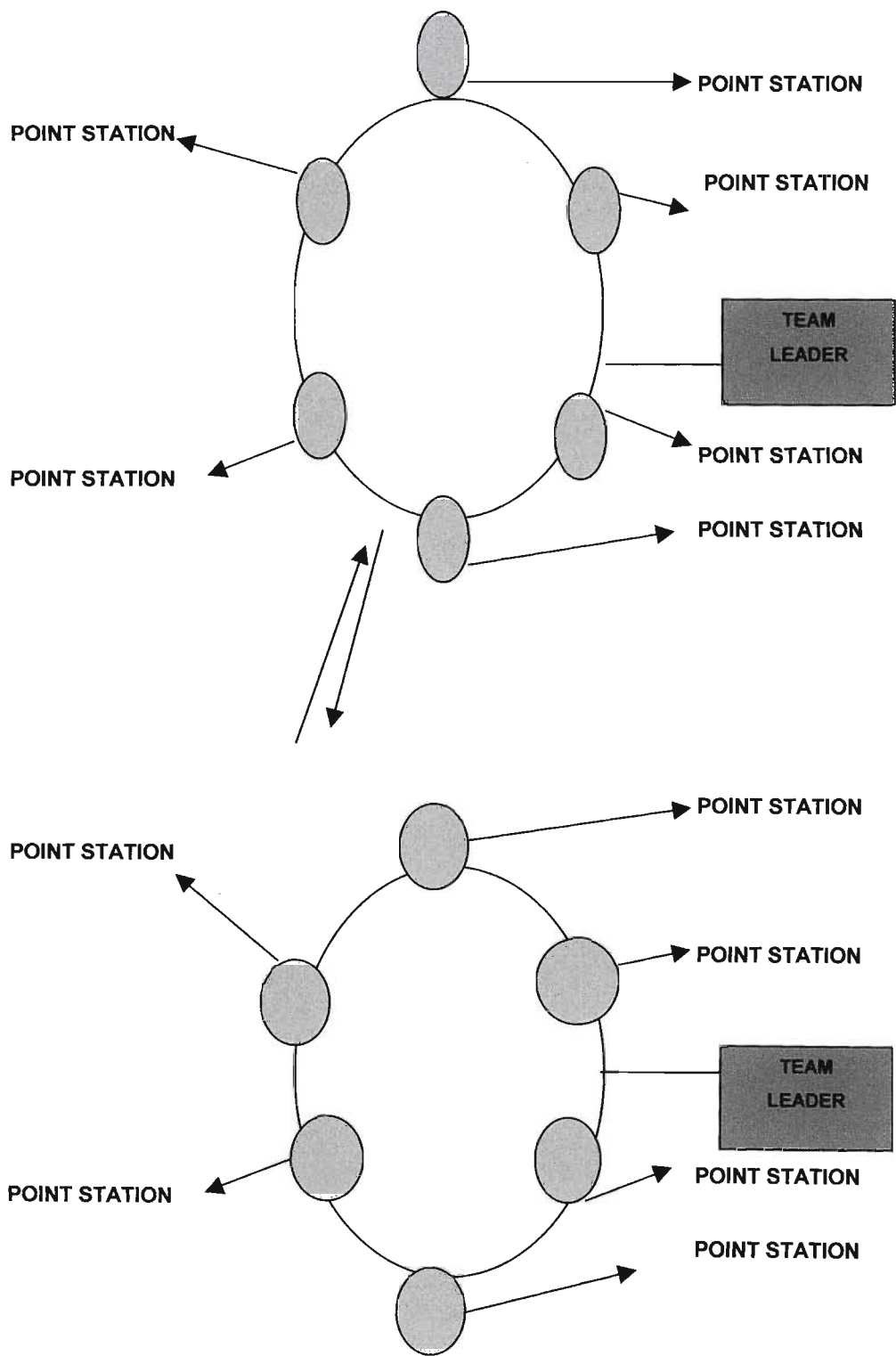


Figure 22

## 5.23 CONCLUSION

I have explained the Multi-Skilling programme initiated at Toyota SA as the role model for the Automotive Manufacturing Industries within South Africa. It is at this point that I should further link the ABET programme to the Multi-Skilling programme within Toyota SA.

With ABET as one of the main components within the Multi-Skilling programme employees are to be encouraged to participate within the ABET levels to further address illiteracy rates amongst employees. This is one of the contributing factors that Toyota SA would address in order to enter into the world class arena. The high flyers (employees who have either Std. 8, Std. 9 or Matric) who are participating in the Multi-Skilling programme would be amongst the first groups of employees to complete the Multi-Skilling programme. These employees would exit at Level 4 with their AMIC certificate. It will be first time that these employees within Levels 1 – 4 would obtain a certificate that is of value from the Auto Mobile Manufacturers within South Africa. This is certainly borne out by comments reflecting this for example from Respondent 2 of the Exhaust Department who suggested that Abet acted as a “bridge towards greater success or better position since most of us were disadvantaged.”

At this point it would be appropriate to ask “Is the Toyota SA Multi-Skilling programme effective? And if so, in what way?”

The answer to the above posed question, is “yes”, the Toyota SA Multi-Skilling programme is effective in that the employees are for the first time exposed to new skills at their work, and they are being recognised for these skills. This is a new training system for employees. Whereas in the old system employees jobs decided their pay, in this new system an individuals pay would depend upon their education, knowledge and skills. Furthermore within this new system employees would have the opportunity to improve their education, knowledge and skills in such a way that once the employees posses the necessary credits for each level, the employee would move up to another level. From the core

knowledge, for the first time in the history of training at Toyota SA, employees would have a general understanding of the business of the "the Auto Industry". The effectiveness of the Multi-Skilling programme is further entrenched by the fact that each employee will be trained in the skills needed in his own stream (area of work), e.g. paint stream, assembly stream, together with the theory surrounding his/her area of work. The employees also now have a clear career path. The employees are also in a position to earn more money in future. Every employee will also have the opportunity to get ahead at their own speed as well and finally the AMIC certificate will be accepted at all the Automobile Manufacturing Industries throughout South Africa.

For Toyota SA in turn, flexibility of employee skills means that the company can arrange the work load so that the employees use their acquired skills and knowledge in the best possible and most effective way. Employees who succeed in the programme described will be more "marketable" as well as increase their opportunities for further development.

It has been proposed by Reid, (1992) that improved competence leads to increased skill mastery which is a fundamental factor in worker empowerment. (REID:32 1992). Feeling in control of your job and being good at it is empowering. (REID:38 1992). Empowered workers are more motivated, more productive and more likely to have innovative, quality improvement ideas (Reid: 63 1992).

With the introduction of the Multi-Skilling programme a clear paradigm shift has become evident within the Automotive Manufacturing Industries within South Africa. The "control" paradigm of hierarchical progression and task-oriented production will become a thing of the past as employees assume responsibility for their work and are rewarded accordingly for their contributions rather than "position" in the organisation.

By shifting then to a "commitment" paradigm, the need for upward progression is replaced by the opportunity for horizontal development and skills acquisition. The need to move people vertically is replaced by the need to become process-

orientated and employees are valued for their skills and use that can be made of them. Process-orientation focuses people on the entire production and encourages Multi-Skilling, rewarding autonomy of action and thought.

It has been suggested that, through this paradigm shift, the need for upward progression is decreased, and as people are then rewarded for their skills, and experience greater job satisfaction they then assume responsibility and ownership, to a certain extent, of their work (Durcan and Oats, 1994).

In Chapter 6, evidence will be presented to demonstrate the impact of the Multi-Skilling process within Toyota SA and to ascertain the emphasis placed on the need for a more highly skilled and Multi-Skilled, flexible workforce.

## **CHAPTER SIX**

### **PRESENTING THE FINDINGS**

#### **6.1 INTRODUCTION**

The central research question of this study is to assess the design and impact of Multi-Skilling and the levels of success and/or failure of Multi-Skilling as a programme that would meet the needs of the motor manufacturing industry for flexibility and increased competitiveness in the world economy.

In this chapter I present results firstly, from the relevant questionnaires at the national level by representation from the seven Automobile Manufacturers, and secondly from the internal interview schedule that has targeted a selection of respondents ranging from management, line supervisors, shop stewards and employees of Toyota SA.

#### **6.2 CONTEXT**

As has been described, due to the connected partnership between both the Employers and Labour within the NBF agreement, the seven Automobile Manufacturers embarked on the Multi-Skilling route.

Guidelines were accepted, in respect of the National Framework of Multi-Skilling, and it was then left up to each respective Automobile Manufacturer to develop their own internal Multi-Skilling Framework, that would best suit their company. As a result, each Automobile Manufacturer who in terms of this agreement is affiliated to the National Bargaining Forum (NBF), used the guidelines that were transferred to the AMIETB where a National Framework was constructed. Then, using the guidelines from this National framework, the company's went on to develop their own Framework that would best suit their environment. In other words company specific frameworks as per operational requirement were divided. It was important that each company had to have support from the role players, namely;

- Human Resources Personnel
- Line Management
- Training
- Shop Stewards

In respect of support, it has been important that all the relevant role players had to form an alliance in order to get the Multi-Skilling programme up and on target. Further the linkage to the A.B.E. programme had to form part of each company's responsibility in order to advance their employees to a level 4 literacy / numeracy education.

The following eight Core Modules were established

- C1 = Health & Safety
- C2 = Employer/Employee Relations
- C3 = Communication Parts 1&2
- C4 = Manufacturing Concepts
- C5 = Material Management
- C6 = Teamwork
- C7 = Understanding our Business
- C8 = Quality Management

Each company had to then accommodate all levels of employees within these core modules. Employees were identified by their tuition requirements as those who needed;

- Full Time Tuition
- Part Time Tuition
- Distance Learning

This task was left to the Training divisions of each of the seven Automobile Manufacturing Industries, as well as the task to encourage employees to participate on the Multi-Skilling programme.

What was further emphasised from the seven Automobile Manufacturers as respondents at the inception of the Multi-Skilling programme, was the importance of the support from line management /supervision. This necessitated a change in mind set; in other words with all these employees now embarking onto the Multi-Skilling programme line managers had to realize the pay off benefit to their area/line.

Presently the manager and the line supervisors have to balance their respective area/line against absenteeism, parts distribution, in order to achieve daily score, with built in tact time and quality as the required measurement. So, with training on one hand voicing “Multi-Skilling” and “flexibility”, it took quite some time for line management/supervisors to adapt to this noted change. As with the introduction of anything new, that involves change, it always takes time to be accepted.

Great emphasis was placed onto the promotion of the Multi-Skilling programme with in house roadshows conducted by the training division, as well as the development of a simplisticly depicted comic-type illustrated version of the explanation of the Multi-Skilling process.

This was widely distributed throughout the Automotive Manufacturing Industry. (See Appendix 4 for a copy of this booklet).

This comic booklet had a far reaching impact on the employees of Toyota SA in that it was well written and drawn and easily understood.

From the interest shown by the employees, as well as line supervisors and management, it would be fair to say that the majority of people to whom the booklet had been distributed indicated a general positive response to the implementation of the Multi-Skilling programme.



Although positive attitudes were detected overall, there was still some resistance in that some of the older employees were unwilling or did not see the need to learn new skills before they retired. They have adopted the attitude “why change what is already in place”. In the event, however, some of these older employees have seen the results to date, and have cautiously approached the Multi-Skilling programme by nominating themselves onto the Adult Basic Education (A.B.E.) programme, and are attending A.B.E. classes.

In analyzing respondents' views from the data collected via interview schedules it is evident that this programme would definitely have struggled to be launched without the active 50/50 roles played by both, management and labour. The support by both partners attributed in the change of mindset of the employees.

### **6.3 THE TOYOTA SA MULTI-SKILLING INTERVIEW SCHEDULE (See appendix 3 for a copy of this interview schedule)**

A batch of 125 interview schedules were distributed throughout the main areas within Toyota SA, namely;

- Manufacturing Operations
- MLD
- Paint Shop
- Body Shop I
- Body Shop II

Of these 125 interview schedules distributed, 100% were completed and returned. The category of respondents represented were;

- Managers
- Line Supervisors
- Shop Stewards
- Employees

- A variety of responses were received. For clarity the responses are given in the following tables:

Each respondent who accepted an interview schedule had employees under their respective control numbering between 1 employee and 141 employees who were within the stages of the Multi-Skilling programme. This represented between 50% to 65% participating employees.

Once all of the information was available, my next task was to analyze and assess the captured data. I was looking to see if the views expressed could stand to tell the story about the benefits of Multi-Skilling in the Company.

The feedback response in respect of the interview schedules are presented in Tables 1, 2, 3 and 4 and are graphically depicted. Qualitative findings are presented thereafter in Section 6.4.

**Question Number 1:** Do you experience an increase in the flexibility of the Multi-Skilling candidates (in other words, can you use these employees on the Multi-Skilling program on more jobs than before)?

**TABLE 1 for Question Number 1**

Total number of questionnaires handed out	Group A	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 1	"NO" response to Question N° 1	"N/A" response to Question N° 1	"NOT ALL" response to Question N° 1	"STILL IN TRAINING" response to Question N° 1
125	Represents 106 x questionnaires returned by 106 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	1875	1001	53%	47%	106 x questionnaires returned with a "YES response to question N° 1.				

Total number of questionnaires handed out	Group A	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 1	"NO" response to Question N° 1	"N/A" response to Question N° 1	"NOT ALL" response to Question N° 1	"STILL IN TRAINING" response to Question N° 1
125	Represents 19 x questionnaires returned by 19 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	319	185	58%	42%		10 x questionnaires returned with a "NO response to question N° 1.			

**Question Number 2:** "Do the Multi-Skilled employees deliver better quality work than before?" If so, which aspects have improved. If no, why do you feel it has not improved?

**TABLE 2 for Question Number 2**

Total number of questionnaires handed out	Group A	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 2	"NO" response to Question N° 2	"N/A" response to Question N° 2	"NOT ALL" response to Question N° 2	"STILL IN TRAINING" response to Question N° 2
125	Represents 109 x questionnaires returned by 109 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	1948	784	40%	60%	10 x questionnaires returned with a "YES" response to question N° 2.				

Total number of questionnaires handed out	Group B	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 2	"NO" response to Question N° 2	"N/A" response to Question N° 2	"NOT ALL" response to Question N° 2	"STILL IN TRAINING" response to Question N° 2
125	Represents 13 x questionnaires returned by 13 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	295	151	51%	49%		13 x questionnaires returned with a "NO" response to question N° 2.			

**Question Number 3:** "Do the Multi-Skilled employees display a better understanding of the aspects affecting production" (e.g. line balancing etc)? If "YES, say which aspects. If "NO", which aspects cause problems?

**TABLE 3 for Question Number 3**

Total number of questionnaires handed out	Group A	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 3	"NO" response to Question N° 3	"N/A" response to Question N° 3	"NOT ALL" response to Question N° 3	"STILL IN TRAINING" response to Question N° 3
125	Represents 93 x questionnaires returned by 93 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	1674	1032	62%	38%	93 x questionnaires returned with a "YES" response to question N° 3.				
Total number of questionnaires handed out	Group B	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 3	"NO" response to Question N° 3	"N/A" response to Question N° 3	"NOT ALL" response to Question N° 3	"STILL IN TRAINING" response to Question N° 3
125	Represents 15 x questionnaires returned by 15 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	396	169	43%	57%		15 x questionnaires returned with a "NO" response to question N° 3.			
Total number of questionnaires handed out	Group C	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 3	"NO" response to Question N° 3	"N/A" response to Question N° 3	"NOT ALL" response to Question N° 3	"STILL IN TRAINING" response to Question N° 3
125	Represents 5 x questionnaires returned by 5 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	55	50	91%	9%			5 x questionnaires returned with a "N/A" response to question N° 3.		
Total number of questionnaires handed out	Group D	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 3	"NO" response to Question N° 3	"N/A" response to Question N° 3	"NOT ALL" response to Question N° 3	"STILL IN TRAINING" response to Question N° 3
125	Represents 10 x questionnaires returned by 10 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	125	64	51%	49%				10 x questionnaires returned with a "NOT ALL" response to question N° 3.	

**Question Number 4a:** In your opinion, do increased levels of ABE (Adult Basic Education) contribute to work station? If so, how?

**TABLE 4a for Question Number 4a**

Total number of questionnaires handed out	Group A	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 4a	"NO" response to Question N° 4a	"N/A" response to Question N° 4a	"NOT ALL" response to Question N° 4a	"STILL IN TRAINING" response to Question N° 4a
125	Represents 89 x questionnaires returned by 89 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	1578	880	56%	44%	89 x questionnaires returned with a "YES" response to question N° 4a.				
Total number of questionnaires handed out	Group B	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 4a	"NO" response to Question N° 4a	"N/A" response to Question N° 4a	"NOT ALL" response to Question N° 4a	"STILL IN TRAINING" response to Question N° 4a
125	Represents 13 x questionnaires returned by 13 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	404	161	40%	60%		13 x questionnaires returned with a "NO" response to question N° 4a.			
Total number of questionnaires handed out	Group C	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 4a	"NO" response to Question N° 4a	"N/A" response to Question N° 4a	"NOT ALL" response to Question N° 4a	"STILL IN TRAINING" response to Question N° 4a
125	Represents 13 x questionnaires returned by 13x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	123	58	47%	53%			13 x questionnaires returned with a "N/A" response to question N° 4a.		
Total number of questionnaires handed out	Group D	Category of respondents	Number of employees replying	Active participant on Multi-Skilling	Active participants as a %	Non-active participants as a %	"YES" response to Question N° 4a	"NO" response to Question N° 4a	"N/A" response to Question N° 4a	"NOT ALL" response to Question N° 4a	"STILL IN TRAINING" response to Question N° 4a
125	Represents 8 x questionnaires returned by 8 x respondents	1. Managers 2. Line Supervisors 3. Shop Stewards 4. Employees	105	105	100%						8 x questionnaires returned with a "STILL IN TRAINING" response to question N° 4a.

**Question number 4b.**

“Do the Multi-Skilling employees display higher levels of :

- Loyalty to work
- Respect to others
- Positiveness
- Punctuality
- Helpfulness
- Co-operation
- Teamwork
- Willingness to teach others
- Willingness to do more than required
- Willingness to implement new ideas

The respondents were asked to answer either indicating a **“yes”** or a **“no”** and **“by what percentage”**?

The findings results will be tabled and depicted graphically.

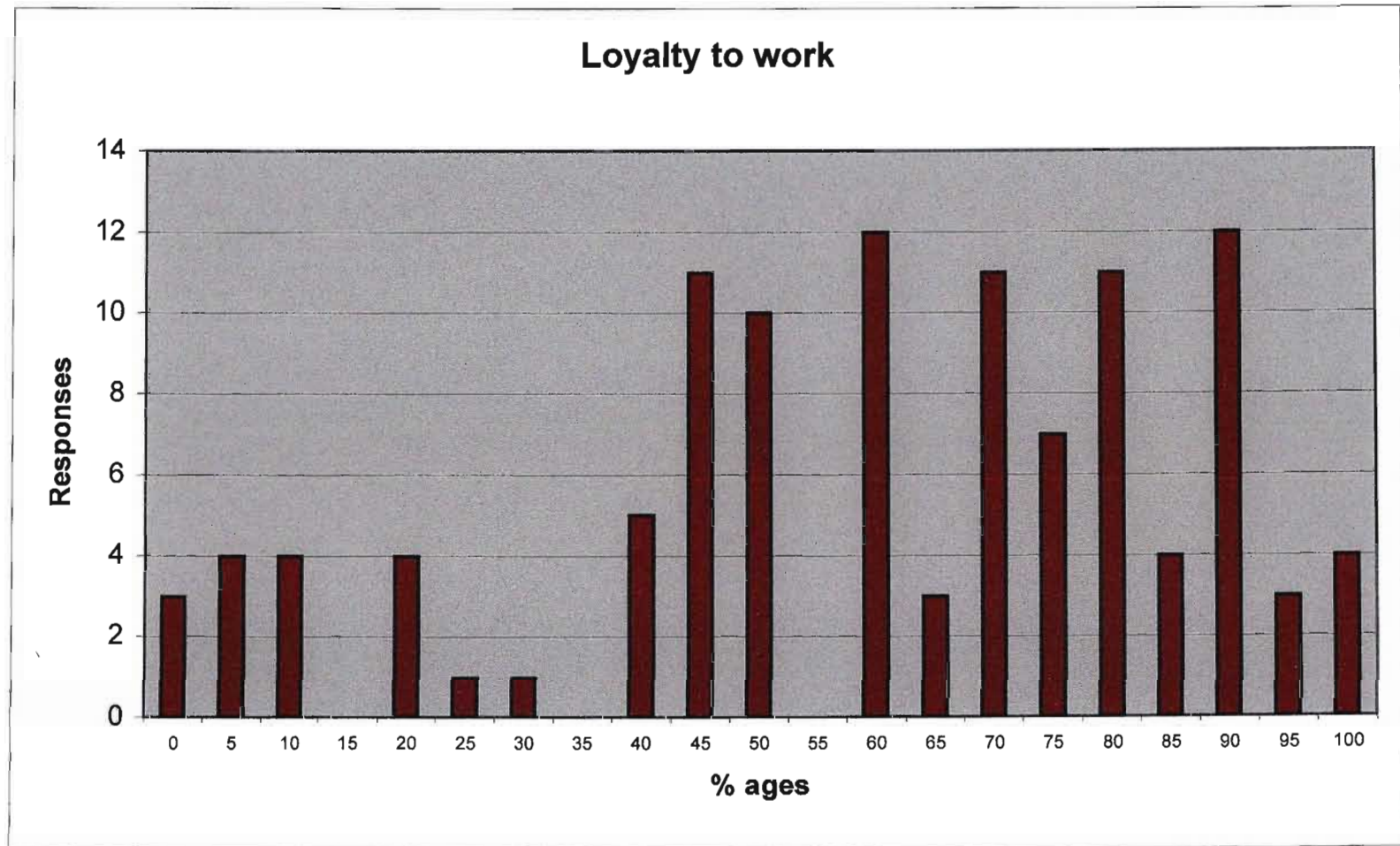
**Table 4b for question number 4b.**

Multi-Skilling Evaluation data

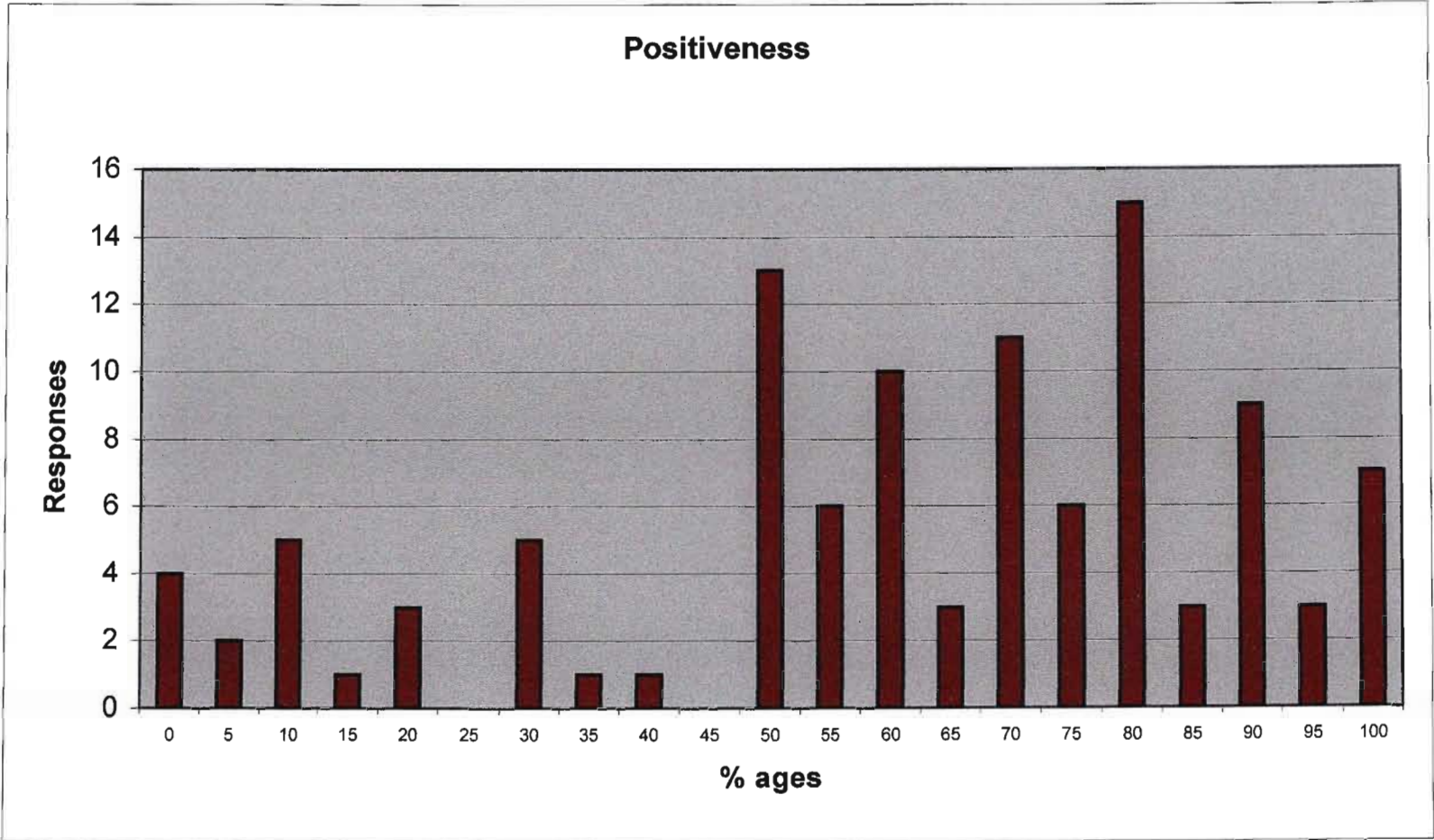
Flexibility		
Yes	No	Not sure
99	15	7

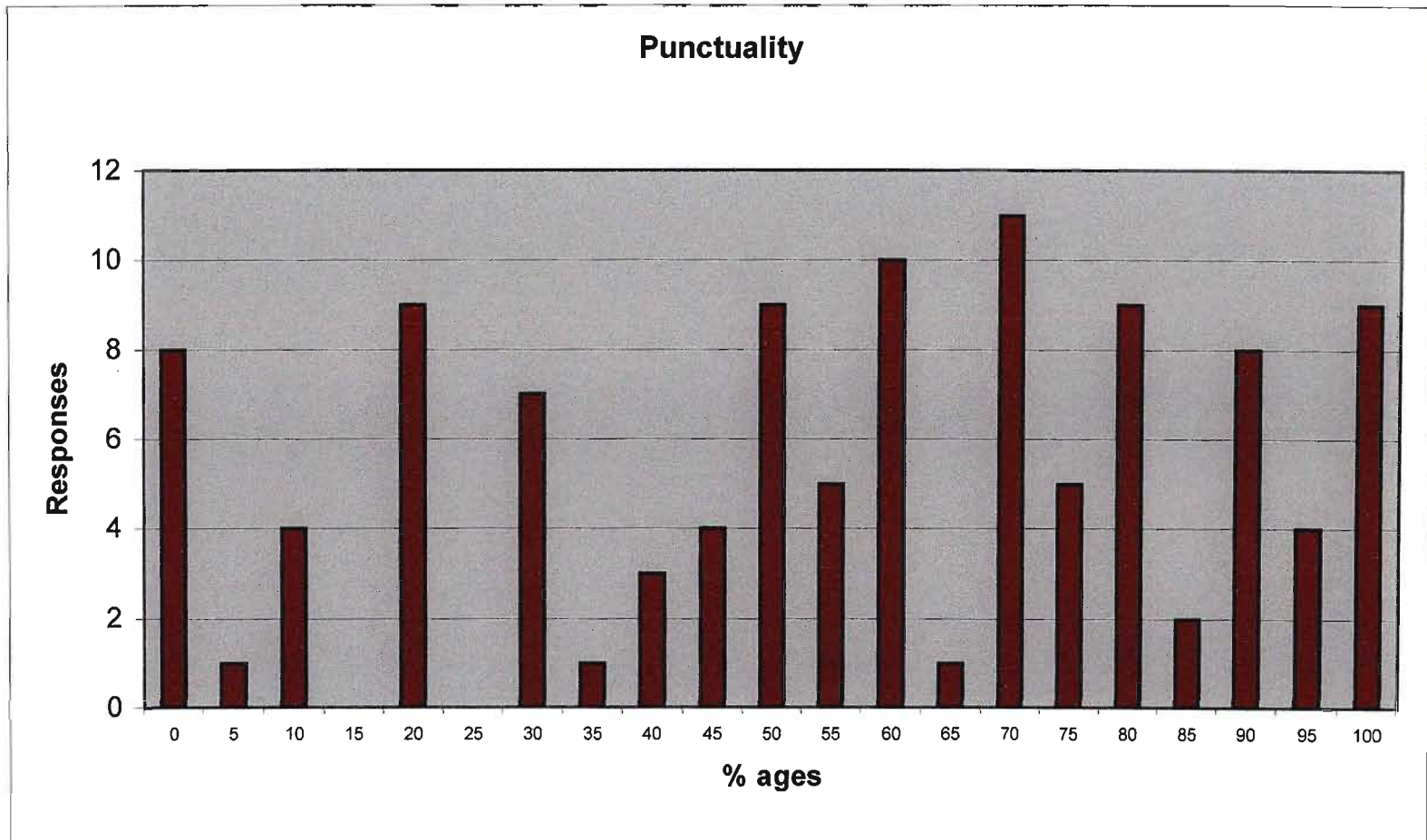
	Loyalty	Respect	Positive	Punctuality	Help-fulness	Co-operation	Team-work	Men-toring	Do more	Imple-ment	
0	3	2	4	8	3	3	7	5	11	11	57
5	4	1	2	1	0	2	1	0	0	1	12
10	4	2	5	4	5	4	3	4	6	8	45
15	0	0	1	0	0	0	1	0	0	0	2
20	4	5	3	9	9	7	4	5	8	13	67
25	1	0	0	0	1	1	0	0	1	2	6
30	1	3	5	7	1	4	1	6	5	3	36
35	0	0	1	1	1	0	0	2	2	1	8
40	5	2	1	3	3	1	5	4	11	5	40
45	11	0	0	4	0	1	3	3	4	3	29
50	10	12	13	9	17	12	11	14	10	18	126
55	0	4	6	5	3	4	4	3	1	2	32
60	12	21	10	10	12	6	8	9	7	3	98
65	3	1	3	1	2	2	2	2	2	5	23
70	11	9	11	11	4	10	6	7	11	9	89
75	7	3	6	5	3	6	2	7	3	0	42
80	11	14	15	9	20	20	21	15	7	3	135
85	4	5	3	2	1	5	3	4	2	4	33
90	12	8	9	8	11	8	10	2	4	6	78
95	3	6	3	4	1	3	6	3	1	2	32
100	4	6	7	9	14	13	10	10	9	6	88
	110	104	108	110	111	112	108	105	105	105	1078



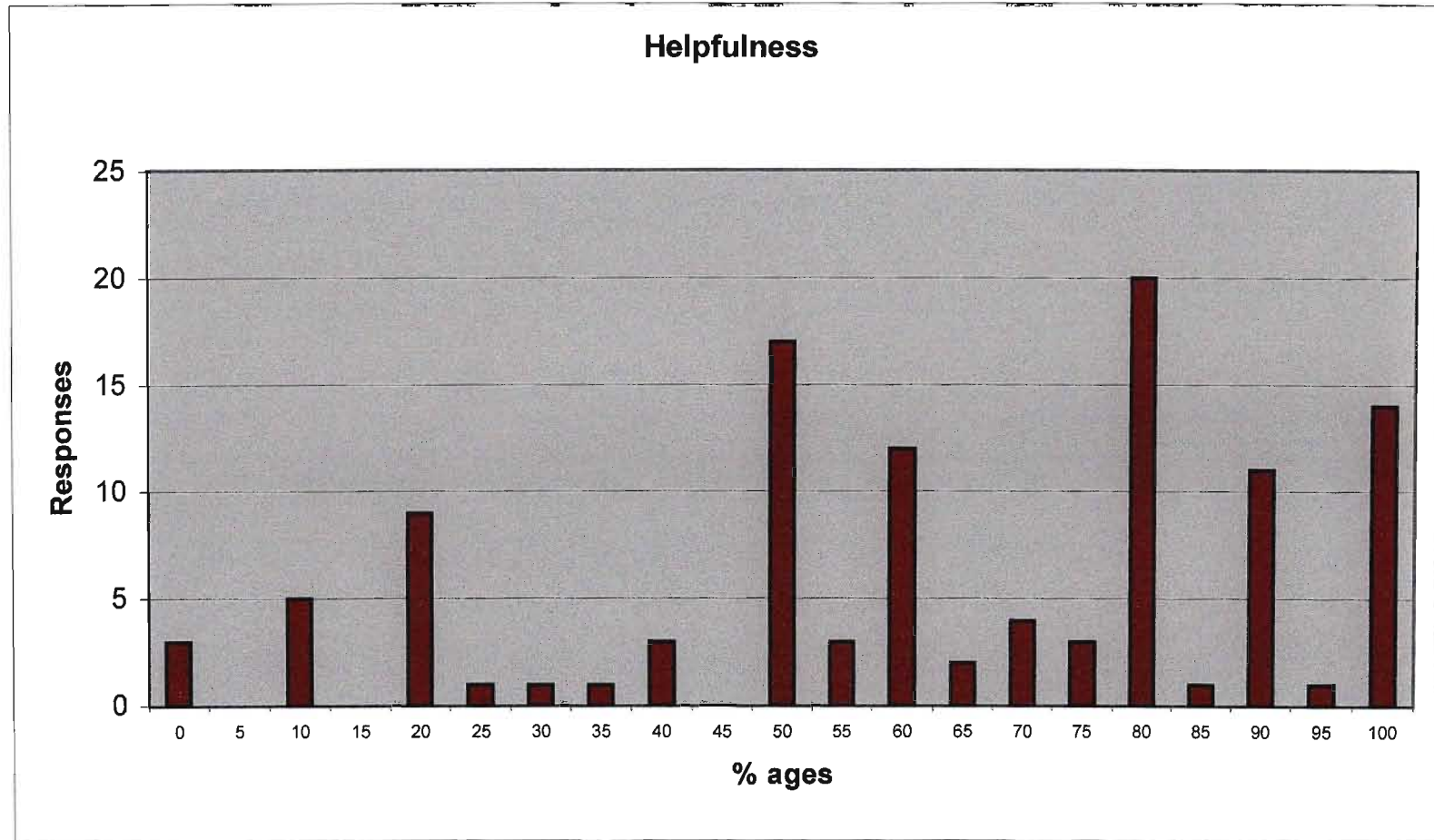


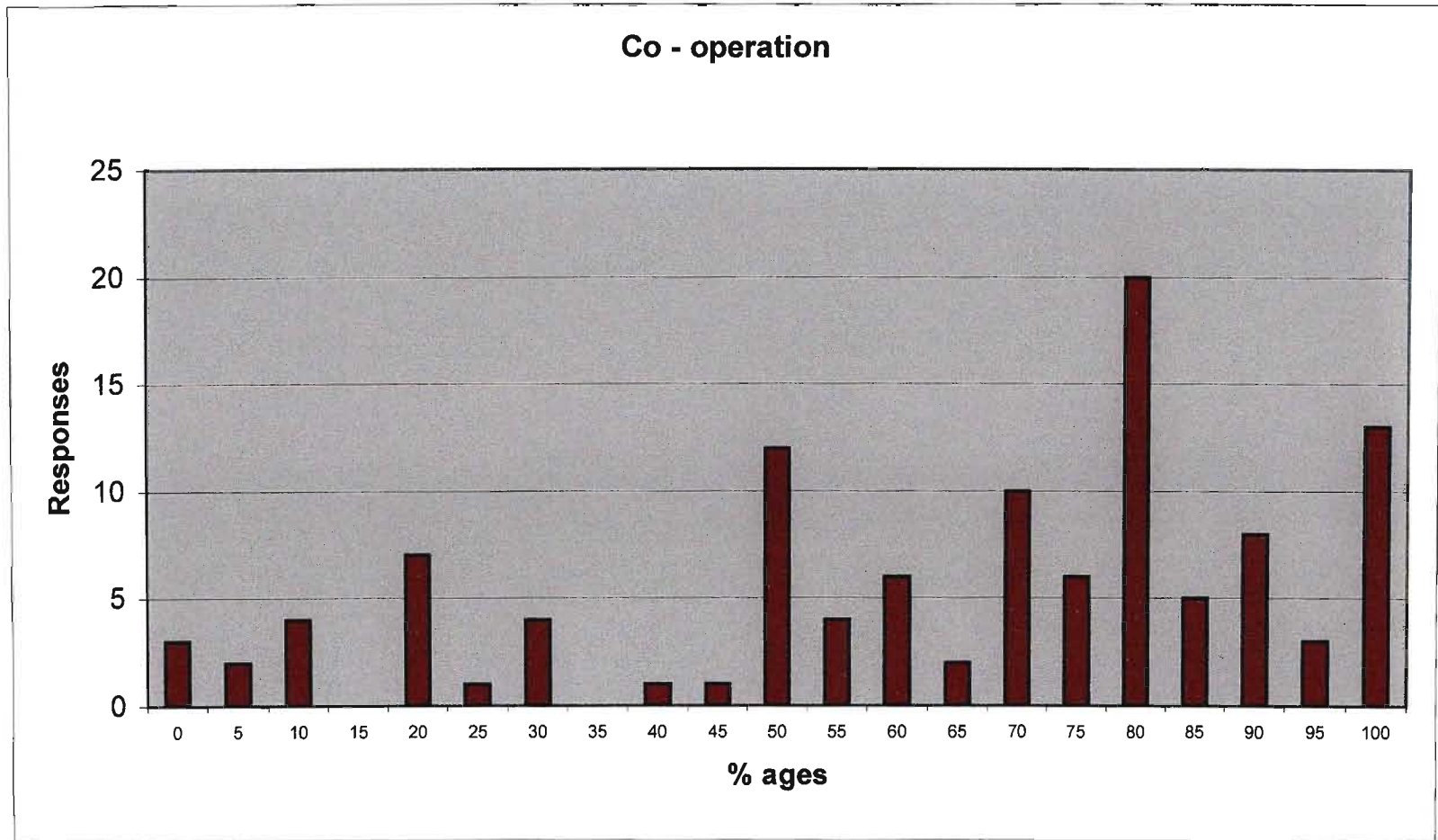


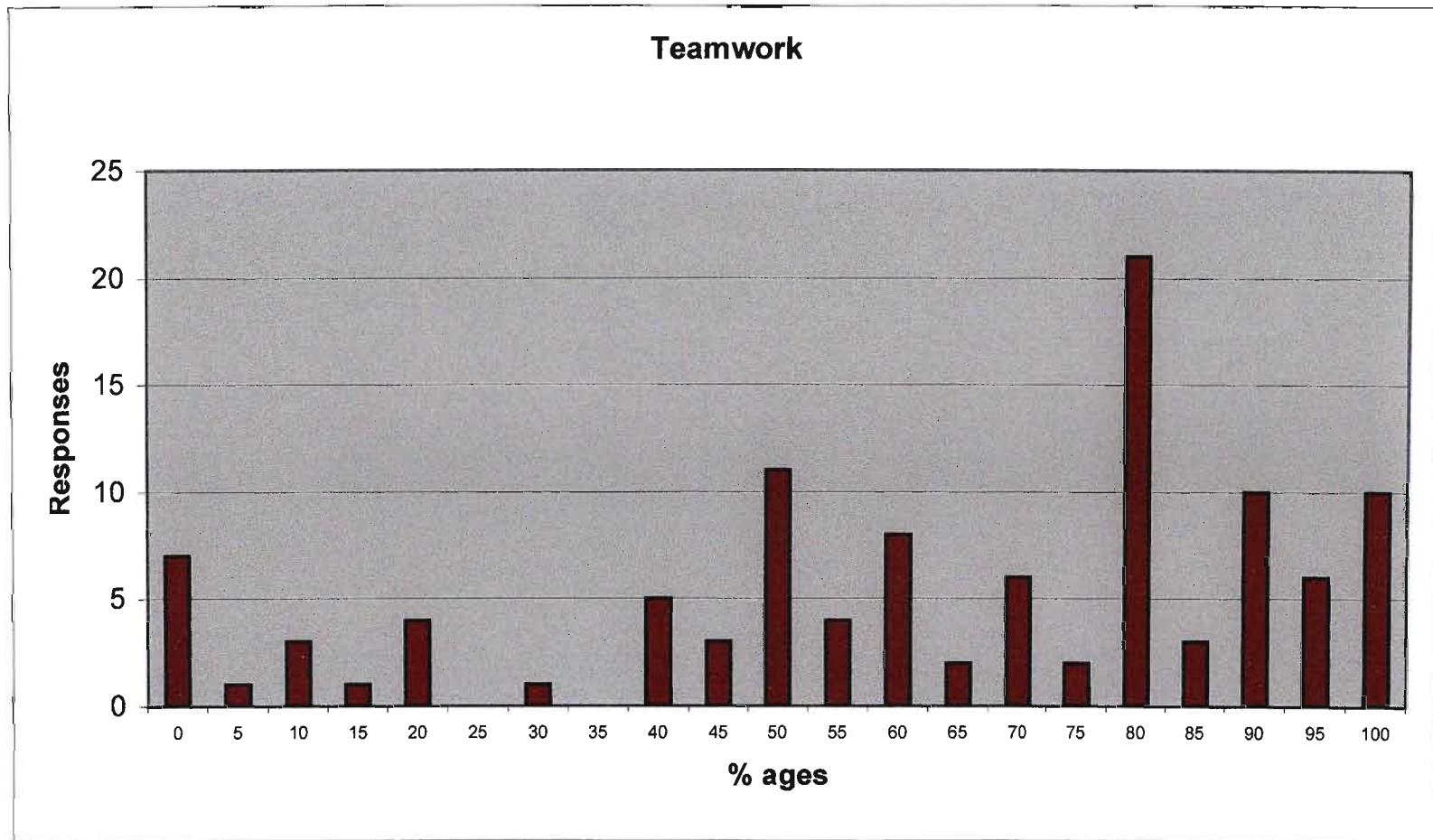


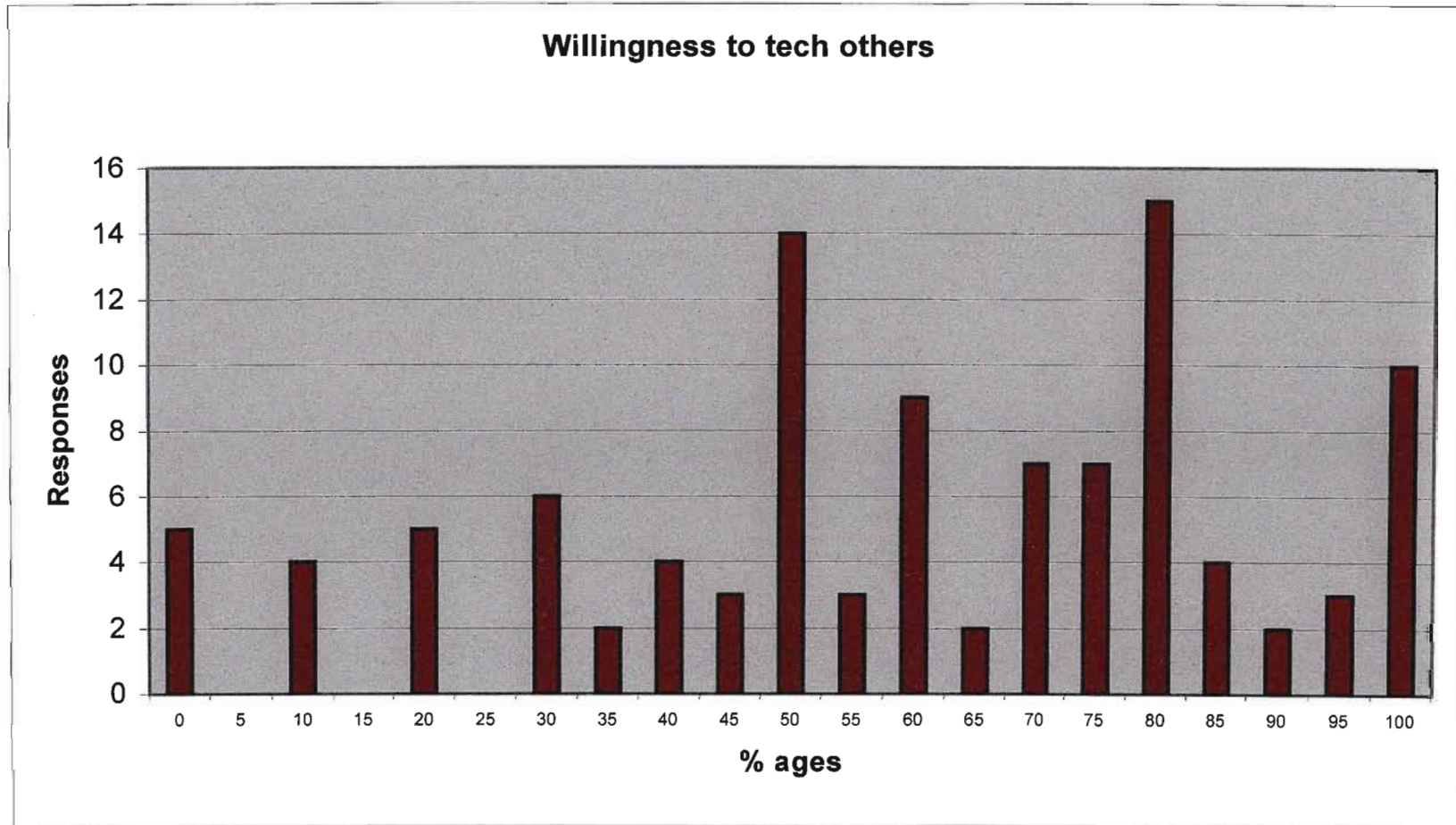




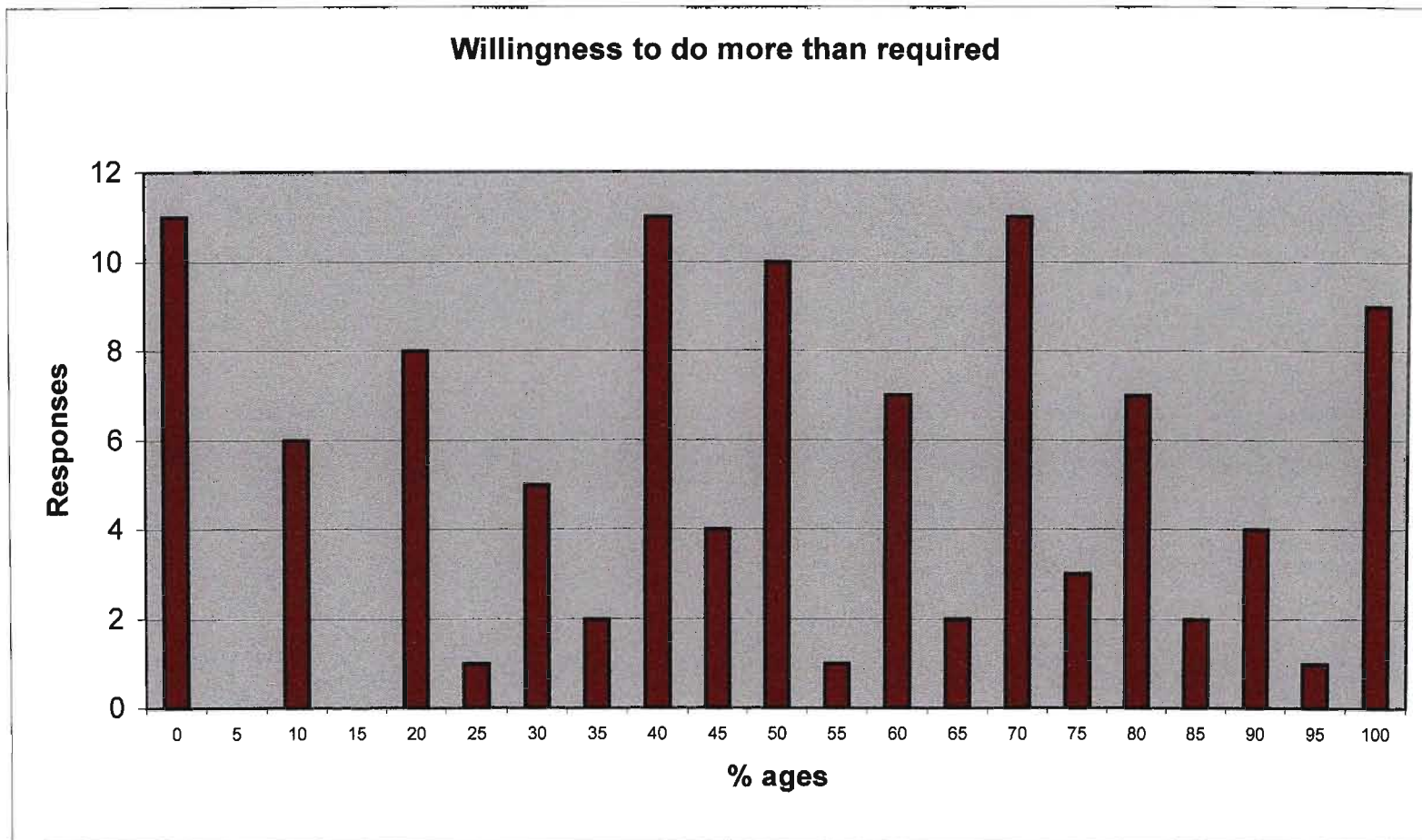


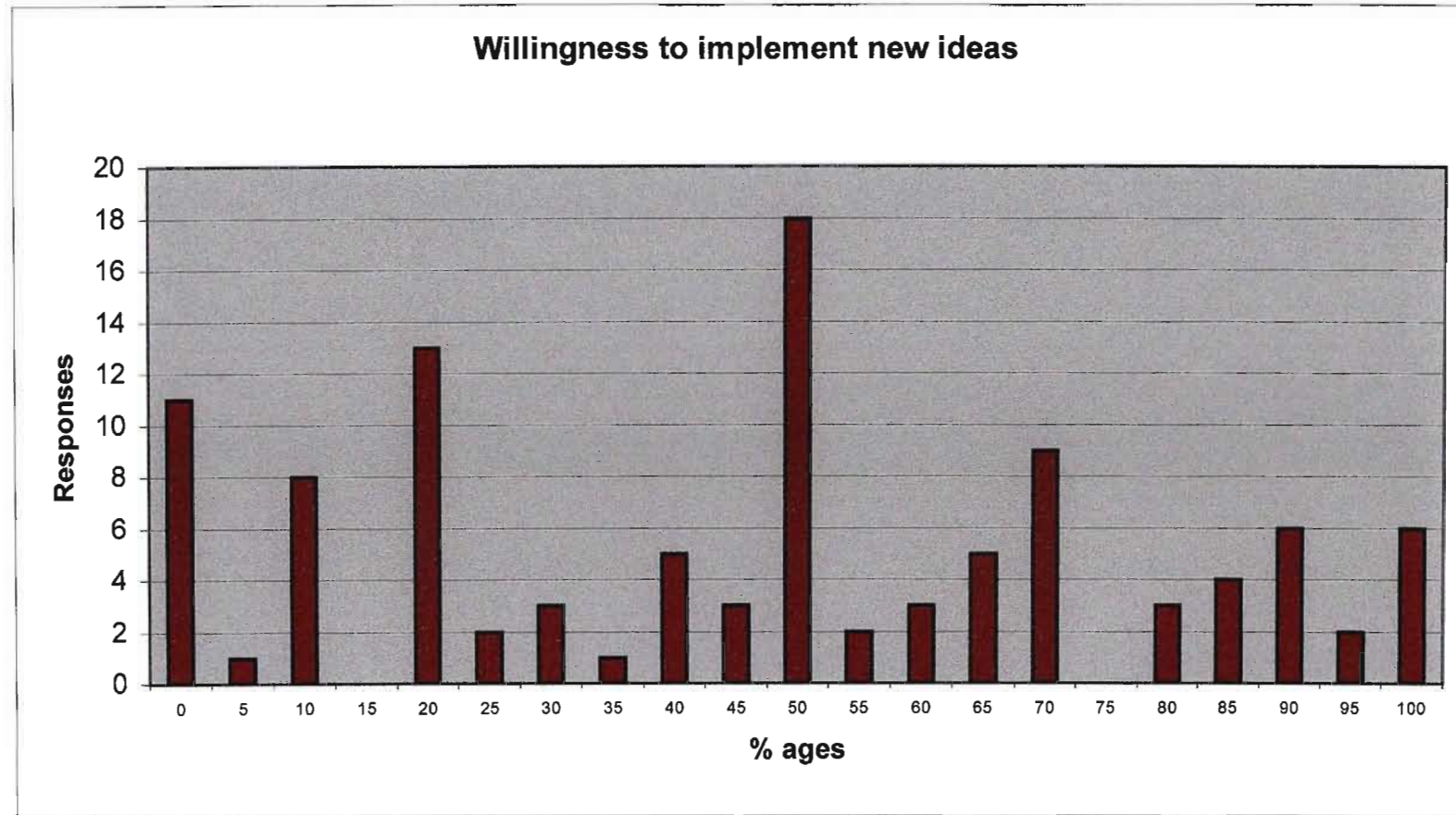








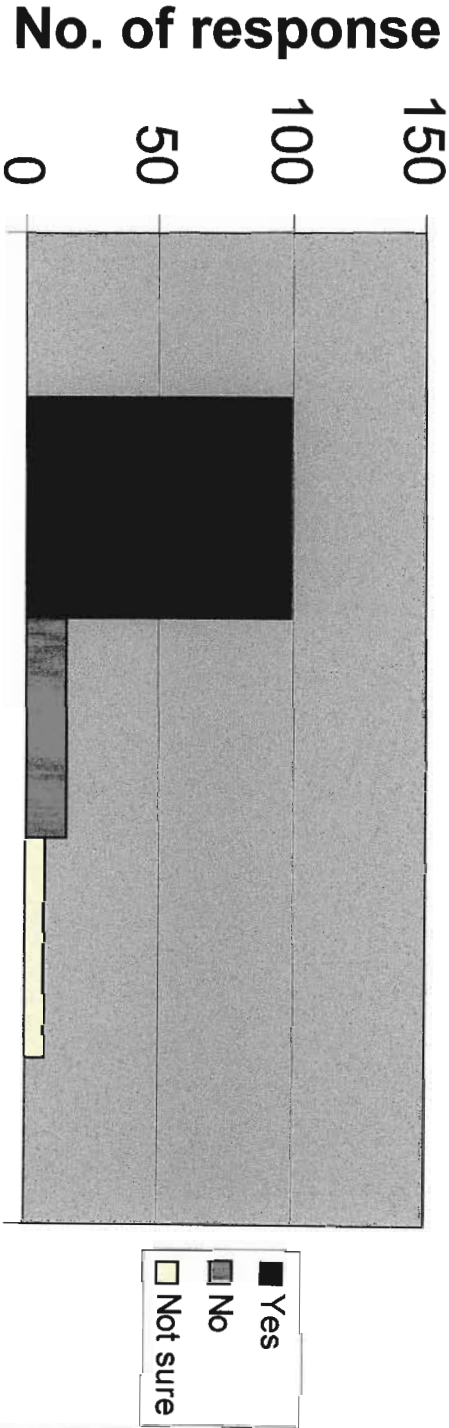




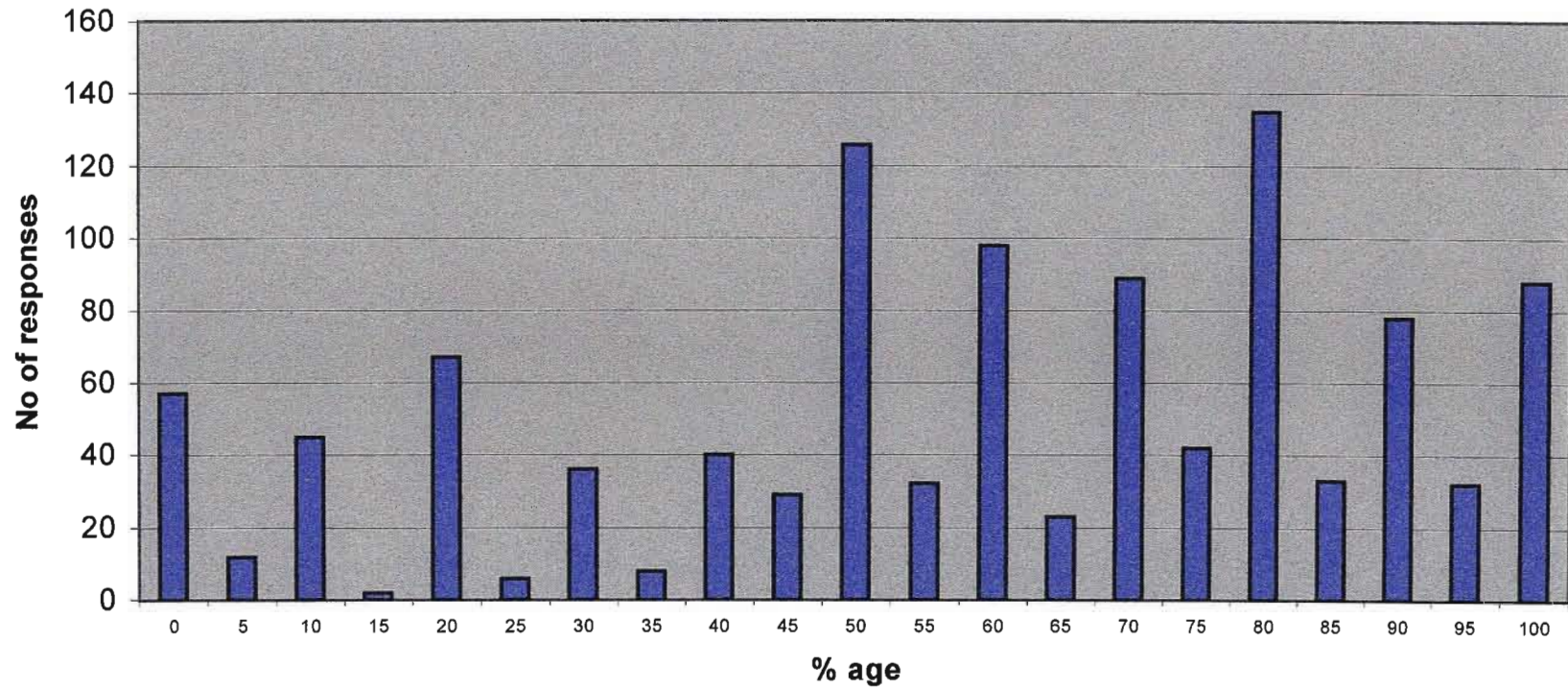
#### **6.4 ARE AMIC'S MORE FLEXIBLE?**

The collective “yes” responses received from these 125 respondents to the questions thus far analyzed certainly outweighs the “no” responses to the same questions, bearing in mind that these respondents were a gross representation of the workforce of Toyota SA. With the main focus being on “Are AMIC’S more flexible”, from the responses this is certainly the outcome, (see graphical representation of responses from respondents). This in itself is an indicator that people perceive the Multi-Skilling programme as working.

# Are AMIC's more flexible?



1

**All responses across questions**



## 6.5 RESPONSES TO THE INTRODUCTION OF MULTI-SKILLING AT TOYOTA SA

As seen from the returned 125 questionnaires by respondents, positive responses far outweigh the negative responses. It should be born in mind that the respondents were a cross representation of the workforce of Toyota SA.

With the main focus being on **“are AMIC’S more flexible”**, the responses suggest that this is certainly the perceived outcome. This in itself seems to suggest that the Multi-Skilling programme is working within Toyota SA.

At the start of the Multi-Skilling programme, there was a total workforce of 6000 hourly graded employees who were RPL’ed in terms of skills. Today there is a workforce of 4000 hourly graded employees with the same volume of vehicles produced. It needs to be stated that the reduction of the workforce from 6000 by 2000 has not been due to retrenchments as a result of the Multi-Skilling programme but rather as a result of downsizing as a natural progression over a period of time.

Lack of participation in the questionnaire from a significant number of respondents might suggest feelings of caution regarding progress to date. Conservative responses to the questionnaire and limited participation on the Multi-Skilling programme in some areas might indicate a certain reluctance and scepticism about the final successful outcomes of the programme.

Listed below is recorded feedback from the scheduled interviews with employees of Toyota SA.

## 6.6 PERCEPTIONS OF OPERATIVES TO MULTI-SKILLING AT TOYOTA SA

The comments about Multi-Skilling received from operatives is recorded below and show how Multi-Skilling has been of overall benefit to the individual worker in different ways. These positive views are supported by line managers and production supervisors as they were in the best position to assess whether

the positive comments about Multi-Skilling received from operatives were making any difference on the production line itself.

### **6.6.1 The main perceived improvements due to Multi-Skilling at Toyota were seen to be:**

#### **Improved Understanding of Toyota as an Organization**

Many workers said that for the first time they understood the wider organization and its business.

- Respondent 3 – It has helped me to understand my job and made it a little easier to:
  - a) communicate better amongst my fellow workers and departments.
  - b) I really think it is great and it is on a medium level for all the workers
- Respondent 1 – Core modules gave me some valuable knowledge of how our company operates. Of all the core modules written except the teamwork module was the most difficult and confusing. I think with the exception of teamwork the Multi-Skilling core modules should do a great deal towards educating our workforce.
- Respondent 4 – I feel Multi-Skilling is very good to upgrade team members and to build Toyota standards. Multi-Skilling contributes to better understanding in the workplace.
- Respondent 5 – Multi-Skilling school is good because it gives the workers more information about the work. Now every worker who joint the skilling school can be enjoy more work because he'he knows what is good and wrong why he have good information. It make everybody happy for their work.
- Respondent 6 – Multi-Skilling gave me a better view of what happens in Toyota. It really educated me on what goes on when you'll are negotiating

with management on our behalf. Very grateful and may it be successful next year like this year.

- Respondent 7 – Means the more learning and know things that do not know before. I know what going on in the company.
- Respondent 8 – Multi-Skilling it helps us to improve our working standard to improve our quality and it can help us to increase our market showing them we can fit to the world class market.
- Respondent 9 – Multi-Skilling is the best thing that has happened in Toyota. Employees are much more interested in the affairs of the company. Employees are given the opportunity to study not only for free but also to be paid for it. This is great.
- Respondent 10 – It gave me a better understanding of how things take place in the company. It helped me to communicate better with people that I work with. It created more awareness in the company and how important some people are to the company.
- Respondent 11 – Multi-Skilling gave me a good understanding of my job, and again now it makes me to be more interested on working in a motor industry like Toyota, because of this opportunity of learning and to be more aware of what is happening in the whole Toyota manufacture/Marketing & customers also after sales

### **Improved Communication and Teamwork**

Whilst this covered internal communication some workers said it even improved communication outside the company, with family members.

- Respondent 12 – Multi-Skilling has done a lot as far as employees are concerned because at the moment workers were lacking skills also poor standard of which there was no good communication amongst team which means that Multi-Skilling have pave the way of good understanding between the workers and also the employer together with the leaders.



- Respondent 13 – Multi-Skilling helps workers to work better in future. It also educated me to work as a team, untie with other workers. I thank who ever idea it is. All the best..
- Respondent 14 – It has made me able to communicate with my fellow workers and understand them. It has also made me to understand my superiors and communicate with them. It has also made me understand the type of work I am doing. Thank you.
- Respondent 15 – It has helped me to understand my job and made it a little easier, to communicate better amongst my fellow workers and departments. I really think it is great and, it is on a medium level for all the workers.

### **Improved Education Opportunities and Greater Flexibility on the Job**

- Respondent 16 – Multi-Skilling has contributed a lot to me by paying me money and increased my grade as well as the education. It also made me know the different jobs within the plant.
  1. Multi-Skilling is to improve ourselves in Education.
  2. Multi-Skilling has to raise our pay.
  3. Multi-Skilling is to give us better job.
- Respondent 2 further expressed – I think Multi-Skilling programme is very important to every Toyota worker or automobile industries. In this programme, we are getting more knowledge of what is going in the motor industry. It is acting as a bridge towards success or better position since most of us were disadvantaged. It is also improving our English communication standard/level.
- Respondent 17 – Core modules have provided the new system people have compulsory for any job in the factory. The old system where people is absent nobody do the job. Multi-Skilling helps in working environment.

- Respondent 18 – Multi-Skilling makes it clear of all what I'm doing in Toyota. It creates chances for me to go top and get more knowledge. If I talk about why we are building cars in Toyota I know that we want to improve finance in our country. It helps me to solve problems easily without consulting my superiors.
- Respondent 19 – My opinion about the Multi-Skilling. Multi-Skilling will give us a chance to increase our knowledge of what is happening in South Africa by the industries, and it will give us a chance on our work to increase grades and I think now it gives us time to talk and communicate easily with other partner

### **Improved Pay as a result of Increased Opportunity**

- Respondent 20 – Multi-Skilling gives a person good benefits and also many opportunities of getting a good job at the next motor company that may employ me. I will tick on it all the modules finished.
- Respondent 21 (Stores Department) – Since I started to learn about Multi-Skilling I know more about what Toyota is doing for employees. I know about manufacturing process and the other things. These core Modules, when you pass them, Toyota pays you when you are Multi-Skilled, Toyota upgrades you.
- Respondent 22 – A good way to improve your knowledge and also helps you to improve your skills. So in this event you can achieve your maximum rate of pay. Very good thought by the company.
- Respondent 23 – A total advantage, getting paid to educate myself in various fields. Makes my job not so boring after all because I know what the other departments are and mainly, I would not be in one position after 20 years because I would be Multi-Skilled.
- Respondent 24 – There is a need for more Multi-Skilling programme, seeing that it is beneficial to employees in many ways. Most important it gives the workers an upgrade and also extra hours in their wage. Me experiencing

this Multi-Skilling gives us the employees a better understanding of our business. I have learnt how to work using examples from the Multi-Skilling programs.

### **Improved Self Esteem and Confidence**

- Respondent 25 – I enjoy Multi-Skilling process because it provides me with chances of understanding my job. It helps me to come up with a quality product that gives confidence to myself as well as to my employer.
- Respondent 26 – Multi-Skilling is a best one. Multi-Skilling open my brain, I fill so happy with Multi-Skilling because make the way forward.
- Respondent 27 – I thought I was not going to get anywhere in Toyota. Just a line feeder but with Multi-Skilling program I have bettered myself. And rotational training helps me to know my way around the plant. I'm happy this came about because I though I would never get a better grade. I would appreciate if this can go on helping others to better themselves.
- Respondent 28 – My benefits from this Multi-Skilling is that now I' able to see where I'm wrong and what to do correct that or to improve the way of working, to tell the others when they do the job. Now I am able to lead them, tell them in good manner what to do and how to do it and it help me a lot because now I can communicate with anybody well without a problem even with my family at home. Now I know the company goals and my goals that I set myself for.

### **Sense of Growth and Development**

- Respondent 29 – Toyota Multi-Skilling help me in many ways like understanding, why others communicate better than others, solving problem, how to achieve goals. I know that time is important. Quality is also satisfy customer and many more.

- Respondent 30 – it showed me that I was just not an ordinary operator but a person of many, many hidden talents being exposed, and this is what put more of me into Toyota than just a four wheel object.
- Respondent 31 – it has given a broader perspective of the Toyota manufacturing industry (many things I didn't know about). It has created within me “golden skills” that any person requires daily (communicating, understanding different people, different races). I'm glad that Toyota has given me this opportunity because it is something I needed. To have both at work and outside of work (being a better person).
- Respondent 32 – Firstly it is a good advantage to us because we are improving our knowledge and capabilities in our work environment. Secondly we get paid for whole hour of work in studying for our examinations. Thirdly it promotes us to higher levels of our job standards and pay. That is the total advantage of Multi-Skilling, which is making our job and life more easier and understanding Toyota.
- Respondent 33 – This is the best thing that has happened to us in Toyota. This is so because through Multi-Skilling we get exposed to our working environment and we also get paid for what we know. Through the years, Toyota has been a “white” orientated company by this I mean we the blacks were left out. Through Multi-Skilling we now have the opportunity to show what we know and what we don't know we can learn. At the end of the day we will be “all round employees of Toyota” building a better company and a better future. Through this learning process we would be upgraded as to what we know and we don't have to be employed for over 10 years to be recognised as a valuable part of our company. This should be an ongoing process for all levels, thus making better quality and product from the very top to the guy on the shop floor. P.S. make it possible for this to happen from here on, so we can get an understanding of our company's growth. In the market place and we can be graded on what we know as individuals.

Multi-Skilling has taught me things of this company that I never knew. Multi-Skilling has educated me and made me understand about business. In the future when I open up my own business I will know how to run my business.

### **Perceptions of Line Managers/Supervisors to Multi-Skilling**

Turning to feedback received from Line managers and supervisors, we can conclude that here too there has been an overwhelming positive response with Multi-Skilling benefiting most in terms of increased job flexibility with positive effects on some sections of the production line. For example one supervisor (Respondent 34) said most of the operatives in his section who had been on Multi-Skilling can now be assigned to other tasks and “deliver better results” as a result of “self inspection.” Comments from other line managers show that as operatives “can be assigned to more functions this has helped address absenteeism as rotational training has increased flexibility (Respondent 35).

- Respondent 36 said that operatives on Multi-Skilling showed better performance and tend to “come forward far quicker when there are rejects or problems on the line” and that there is a willingness to accept changes.
- Respondent 37 as workers take responsibility.” The value of improved education through ABET have also been beneficial, according to Norman who says that it has led to the “ability to understand the reasons why things have to be done a certain way “ and that this can “ only contribute to the work situation.” Respondent 38 says that he had one worker who could not read or write but “now he does and can work on different models.”
- Multi-Skilling has also lead to better quality according to Respondent 39 as it has created “quality conscious, better understanding and communication.”

As shown in the detailed presentation of finding supervisors and line manager responses support the positive responses to Multi-Skilling received from operatives.



In specific relation to the education ABET component of Multiskilling responses show that ABET is seen as a valuable integrated component of the programme.

Respondent 16 says that “Multi-Skilling is to improve ourselves in education” demonstrates value placed on the education module (ABET).

Respondent 2 “..it acts as a bridge towards greater success or better position since most of us were disadvantaged as it is also improving our English communication standard/level.”

Respondent 39, another supervisor says that increased levels of ABET “do contribute to the work situation by providing employees with better understanding and communication skills” whilst Respondent ? thinks ABET does contribute “a lot because people can now read, write and understand English.” These comments are just a selection from many direct responses and provide useful feedback on this component of the Multi-Skilling programme as extracted from my case study work.

Supervisors asked about the role of ABET and the difference it has made to the work situation commented also on the positive effects:

Respondent 36 who has 5 out of 13 people reporting to him, participating in the ABET module says ABET “gives a person the ability to understand the reason why things have to be done in a particular way.”

## **6.7 CONCLUSION**

The research findings thus provide evidence that there is a positive perception of Multi-Skilling amongst operatives who have been involved in the programme at Toyota SA and amongst line managers and supervisors within the sections they work in.

## **CHAPTER SEVEN**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **7.1 CONCLUSIONS**

The Multi-Skilling programme seems to have been positively received by both employer and the majority of employees as a means of addressing education, training, and advancement. Most respondents to the questionnaire appear committed to the concept. I had initially set out to assess whether the Multi-Skilling programme at Toyota SA had made a difference in any way. These results prove in fact that there have been great advances in the education, training and advancement of operatives.

The results show that like in the Ralcorp and BHP Cooper cases cited by Dalton (1998), this programme too has resulted in a more flexible workforce able to deliver flexible advantage. Comments received directly from many levels of the company give clear indications that the exercise has been transformational on many levels. First not only does Toyota SA have a more flexible workforce with ability to perform a wider range of tasks than before, but operatives also now have a better understanding of Toyota SA as a “business” in general. This is something that was previously lacking. With this new understanding has come new awareness of Toyota SA as a player in the world economy as well and of the need for Toyota SA to maintain competitiveness in the global stakes or face closure. This understanding has in turn injected a new enthusiasm for productivity and competitiveness as the workforce readily applies its flexible skills base to ever changing production targets.

For continued relevance, the Multi-Skilling process, cannot and must not be allowed to be viewed as a once-off transformation, but rather as a continued path of advancement. The programme has impacted on the overall culture at Toyota insofar as a culture of learning has now definitely been installed in those employees who have embarked positively onto the Multi-Skilling Programme.

Hague (1997:28) suggested that maintaining momentum and enthusiasm need to be integral parts of the process of continuous improvement.

Such momentum and enthusiasm is now firmly established at Toyota SA as the Multi-Skilling process allows individual employees to undertake continuous education and training. This allows for advancement but is also a motivating factor as these newly acquired skills are acknowledged with a parallel system of wage increases.

Thus from the inception stages, the three stages of the Multi-Skilling process appear to have produced positive results for both employer and employee, viz:

- **ABE**

The literacy and numeracy levels of the employees are improved.

- **CORE**

The employees for the first time could begin to understand the broader knowledge about their work place through the core materials dealing with, for example:

- Team work
- Communication (Part 1 & 2)
- Quality management
- Manufacturing Concept
- Health & Safety
- Employer / Employee Relations
- Material Management
- Understanding Our Business

- **TECHNICAL**

Where the practical—skills applicable to a specific task are performed competently. In addition, the theory/knowledge related to those practical skills is now understood where they previously might not have been.

With these stages firmly in place, the employees have a clear route to follow from the RPL stage performed for and by each employee. They are then



placed into the Multi-Skilling framework and from there onwards these employees each had a clearly defined progressive career path.

All of the above falls within the framework of the “Kaizen” mind as well which is the operating philosophy guiding continuous improvement at Toyota SA. The intention of this philosophy has I believe been fulfilled to some extent as employees now filled with self worth and a sense of responsibility, are taking up the opportunities to promote Kaizen in a real way, by offering suggestions and participating in finding solutions that bring about improvements in work areas. This is working very well especially as there are designated areas and times set aside to achieve this Kaizen objective.

As productivity at Toyota SA has definitely increased as a result of Multi-Skilling – there are now fewer line stoppages as workers are able to take on other tasks on line – there does appear to be a direct link between improved education and/or technical skills training and benefits to the economy. As Toyota SA’s unit output increases as a result of the above the company is able to maintain its ratings and enter the export market where it might previously been unable to. Thus the position taken by Samson and Vally (1996), that education plays a significant role as a national investment appears to be supported by this research. I believe a significant factor in the overall success of the programme has been the inclusion and integration of core modules with electives that are part of “general” education which together have served to provide operatives with a wider understanding of their more immediate work context.

Thus with well trained Multi-Skilled employees the Automobile Manufacturing Industries in South Africa will be able to ensure production versus quality and position the Automobile Manufacturers in South Africa to be globally competitive.

The link between the need for training and a post-Fordist approach to a training investment that creates a more flexible workforce willing to

undertake a greater number of tasks has in fact allowed Toyota SA to keep pace with rapid changes taking place in the wider global motor manufacturing industry. This seems to bear out Samson and Vally's (1996) position in making a case for post-Fordist investment education that results in improved quality, increased productivity and economic performance as this has in fact been achieved at Toyota SA.

Significantly, before the introduction of the Multi-Skilling programme employees at the operative level were not subjected to movement within the work place.

With the introduction of the Multi-Skilling programme, employees at the operative level are clearly made to understand, and are willing to be utilised where they are needed within the skills levels 1 – 4. This is a major plus factor for the South African Automobile Manufacturers. From the result of the questionnaire it is clear from the responses of the respondents, that they have had, and are still experiencing, the positive benefits of the Multi-Skilling programme now that Line Management and Supervisors are in position to allow their subordinates to take charge of their work stations. This in itself has a two-fold benefit in that it creates self worth for the employee and allows the production stations to be manned by competent employees who now have the relevant knowledge and skills. This was not the case before the Multi-Skilling programme was introduced. The employees had the skill but not the full knowledge of their workstations.

The degree of participation of employees intimated in this case study has been achieved, based on the first hand experiences of the respondents within the Multi-Skilling programme, based on their openness and willingness to interact personally with the employees under their control.

## 7.2 RECOMMENDATIONS

After consideration of the lessons learned during this study I make the following recommendations.

1. On a micro level more organisations need to consider the benefits of developing a committed and motivated workforce through participation, training and education. The road to success does not guarantee short term profits, but the long term rewards as this programme is still in its infancy. Therefore Multi-Skilling could well be one of the means to an end and could form an integral part of an organisation's strategic plan.
2. To avoid unrealistic expectations, resources should be checked and the implementation time scale discussed up front, as a Multi-Skilling programme requires extensive resourcing in terms of time, energy, training, facilities and budget.
3. In terms of education, information and communication the employees need to be educated about Multi-Skilling and the objectives thereof. In other words, employees need to understand the business and customer needs for quality, value service and responsiveness. This should be achieved through core modules. Further, the employees need to understand cost generators for example down time (that is when production is not running), poor quality, as well as how costs can be reduced.
4. Communication about the programme must be ongoing and directed to all members of the organisation, particularly those employees not immediately exposed to the Multi-Skilling initiative.
5. With the exit of skilled people from South Africa to other overseas countries to address these skill shortages, Multi-Skilling could well be one answer to address the shortage of skills.
6. The information in this study could provide a basis for a wider-reaching study of a more quantitative nature. In such a study, sampling could be undertaken on a much larger scale. As the knowledge of, and exposure to, a

Multi-Skilling programme is on the increase, it is probable that the process of finding sufficient respondents with knowledge and training on Multi-Skilling could become easier.

### **7.3 QUESTIONS FOR FUTURE RESEARCH**

The Multi-Skilling programme has brought about major changes in the structure and design of training for operatives within Toyota SA. Most significantly it has enabled operatives to upgrade their job functions to a Level 4/Amic Certification Level. A key question would be the extent to which employees are able to continue their learning and career pathing onwards and up the ranks through to general manager level for example. This would be an interesting case study to pursue in the future.

Secondly the Multi-Skilling programme required a major mind shift if not paradigm shift on the part of all players – that is management, labour and individual employees. What has been achieved in terms of a shift in thinking, example greater flexibility, understanding the Kaizen approach plus a new sense of self esteem – has been remarkable. The question is whether this shift is sustainable into the future and can form the bedrock for further advancement of employees and improvement to productivity.

**INTERNAL REFERENCES (TOYOTA SA)**

<b>RESPONDENT</b>	<b>AREA OF WORK</b>	<b>DESIGNATION</b>
1	Quality Control	Inspector Final Line
2	Exhaust Department	Team Leader
3	Toyota Automotive Components 1	Team Leader
4	Manufacturing Operations	Team Member
5	Toyota Stamping Division	Team Leader
6	Manufacturing Operations	Team Member
7	N.P.S. (P2)	Team Leader
8	“B” Plant – Assembly Operations	Team Member
9	Manufacturing Operations	Team Leader
10	“B” Plant Assembly Operations	Team Leader
11	Assembly Pats Logistics	Team Member
12	Assembly P&D Vehicle Final Line	Team Member
13	Hilux Chassis	Team Leader
14	New Paint Shop	Team Member
15	Logistics Export	Team Member
16	Logistics Parts	Team Leader
17	Manufacturing Operations	Team Member
18	Manufacturing Operations	Team Member
19	New Paint Shop	Team Leader
20	Logistics C.K.D	Team Member
21	Manufacturing Operations – Stores	Team Member
22	Quality Control	Inspector Final Line
23	Toyota Automotive Components 2	Team Leader
24	Body Shop One	Team Leader
25	Manufacturing Operations	Production Welder
26	Manufacturing Operations	Team Member
27	Manufacturing Operations	Team Member

28	Manufacturing Operations – Stores (Logistics Data Capture)	Team Member
29	Manufacturing Operations – Line	Team Member
30	Manufacturing Operations – Store	Team Member
31	Old Paint Shop	Team Leader
32	New Paint Shop	Team Member
33	Manufacturing Operations – Stores	Specialist Clerk
34		
35	Manufacturing Operations – Material Control	Supervisor
36	Materials Conveyance : Local	Supervisor
37	Toyota Automotive Components	Manager
38	Camry / Conquest Line	Supervisor
39	Conveyance	Line Manager

### Automobile Manufacturing Industry

NBF Agreement (Wage Increases and Conditions of Employment) July 1, 1993 to June 30, 1994

#### Parties to the Agreement

##### Employers

Associated Automotive Distributors (Pty) LTD

BMW (South Africa) (Pty) LTD

Delta Motor Corporation (Pty) LTD

Man Truck and Bus (S.A.) (Pty) LTD

Mercedes Benz of South Africa (Pty) LTD

Nissan South Africa (Pty) LTD

South African Motor Corporation (Pty) LTD

Toyota South Africa Motors (Pty) LTD

Volkswagen of South Africa (Pty) LTD

#### Unions:

National Union of metal workers of South Africa

S.A. Yster, Staal-en Verwante Nywerhede - UNIE

## EXTERNAL REFERENCES

Advisory Council for Adult and Continuing Education (ACACE) (1982)

Continuing Education : From Policies to Practice, Leicester : ACACE

Bird, A. (1997) "Competencies and the NQF", Address at the Annual National Psychometric/Industrial Psychology Conference, June 1997.

Bird, A. (1991) "Negotiation for Change: The COSATU view of changes needed in the provision of Adult education and training in South Africa, Presentation to State Symposium, October 1991.

Bless, C. and Achola, P (1988) Fundamentals of Social Science Research Methods : An African Perspective, Government Printing Department : Lusaka.

Cutler, T. (1992) 'Vocational training and British economic performance : a further installment of the "British Labour problem"', Work, Employment and Society, 6,2, 161-83.

Dalton, Glen. L. (1998) "Management Review The Collective Stretch"  
P: 54-59 ILLUS: CHARTS, (Journal).

Edwards, R SIEMINSKI, S. and ZELDIN, D. (1993) Adult Learners, Education and Training; London, Routledge.

Edwards, R. (1997) Changing places? Flexibility, Lifelong Learning and a Learning Society; London, Routledge.

Giddens, [www.sociologyonline.co.uk/politics/](http://www.sociologyonline.co.uk/politics/) Giddens

- Glyn, A. (1996) 'The assessment : unemployment and inequality' ; Oxford Review of Economic Policy : 11, 1 : 1-25.
- Gorz, A. (1989) Critique of Economic Reason, London :Verso,  
2<sup>nd</sup> Polity Press. London
- Gorz, A. (1999) Reclaiming work, Beyond the Wage – Based Society  
2<sup>nd</sup> Polity Press. London
- Hackim, C. (1987) Research Design; Strategies and Choices in the Design of Social Research, Allen and Unwin (publishers) Ltd: London.
- Hague, Helen. (1997) Change the Culture and make a skilling.  
Training, Total quality, Compensation, Employee Empowerment,  
manufacturing, page 28, 54-57
- Hague, Helen (1997) "Works Management" Vol 50 ISS: 10
- Hale, Adrian (1996) "Team of many talents" Journal, British Journal of Administrative Management P: 8-9
- HSRC (1995) Ways of seeing the National Qualifications Framework, Human Sciences Research Council (Publishers): Pretoria.
- Jones, S. (1994) "The analysis of depth interviews" ' in Wolcon, H. (Ed) (1994) Transforming Qualitative Data ; Sage : Thousand Oaks.
- Journal, 'IRS Employment Review' (RRR) ISSN: 0046-9246 ISS: 605,  
Date: April 1996 P:55-58 ILUS: Charts. 'Skills - based pay and Multi-Skilling: Bayer Diagnostics and Portsmouth: (Authors, Anonymous).



Journal, 'Industrial Relations Review & Report' (RRR) ISSN: 0046-9246 ISS:570

Date: Oct 1994 P: SSSS12 – SSSS14 ILLUS: Charts, 'Employee development; Training; Polls & surveys; Statistical data: Many industries Geo Places: UK  
'The renewed issue of skills shortages; Evidence from the Skill Needs in Britoun survey: (Authors, O'Dwyer).

Kraak, A. (1991) "post-Fordism and a future education and training system for South Africa" in Education in a Future South Africa; Unterhalter, E. Wolpe, H. and botha, T. (Eds.) Heinemann Publishers South Africa: Houghton

Lyster, E. (1992) 'An overview of the debates' in Hutton, B. (Ed) (1992) Adult Basic Education in South Africa; Literacy, English as a second language, and numeracy; Oxford University Press: Cape Town.

Machin, A. (1993) Summary of Training/Skills/Grading/Adult Basic Education issues; Participatory Research Project – COSATU.

Marcum, J.A. (1982) Education, Race and Social change in South Africa; University of California Press Berkley.

Mashingo, P (1994) Training for Economic Participation. Education for Economic Development; August, Vol. 3p 19.

Mathews, J. (1993) 'The industrial relations of skill formation', The International Journal of Human resource Management, 4, 3, 591-609.

Mouton, J. and Marcus, H. (1990) Basic Concepts in the Methodology of the Social Sciences; Human Sciences Research Council: Pretoria.

Murray, R. (1989) 'Fordism and post-Fordism', in S. Hall and M. Jacques (Eds), New Times: The Changing Face of Politics in the 1990s, London: Lawrence & Wishart, pp38-53.

National Institute of Adult Continuing Education (NIACE) (1990), *People, Learning and Jobs: A new Initiative*, Leicester : NIACE.

O, Dwyer, T. (1994) 'Education training and the White Paper' in *Le Magazine for Education, Training and Youth in Europe* : 14-15.

Ozaki, Muneto (1996) 'Labour relations and work organization in industrialized countries'. Journal, International Labour Review (BOU) ISSN: 0020-7780 Vol 135 ISS: 1

Pritz, S.G., and Imel, (1992), (ED362663) *Involving Workers in Workplace Literacy*. In *Proceedings of the twelfth Annual Mid West research – to – practice conference*, edited by K. Freer and G Dean. Columbus : OHIO State University.

Samson, M. and Vally, S. (1996) "Snakes and Ladders, promises and potential pitfalls of the NQF. South African Labour Bulletin, August 1996 pp 7-14.

Saunders, E. (1997) "Introduction to Competency Based Assessment Training Module One". Competency Based Recruitment and Selection: Training programme presented on 10 and 11 September 1997.

Sieber (1976) M Miles (1983) "Qualitative Data as an Attractive Nuisance. The problem of analysis" In J. van Maanen (Ed) Qualitative Methodology; Sage: California.

Taylor, M.C. et al (eds) (1991) Basic Skills for the Workplace Toronto; Culture Concepts INC.

Van Maanen, J Dobbs, J. and Faulkner, R. (1982) Varieties of Qualitative Research; Sage: California.

Van Maanen, J. (1983) van Maanen (Ed.) Qualitative Methodology, Sage Publications : California.

Walker, R. (1994) "Evaluating applied qualitative research:., In H. Wolcoh (Ed.) Transforming Qualitative Data; Sage : Thousand Oaks.

WITS Education Policy Unit (1996) Between vision and Practice: Policy Processes and Implementation. Quarterly Review of Education and Training in South Africa; Vol 3 Number 3 March.

Wolcott, H. (1994) Transforming Qualitative Data; Sage: Thousand Oaks.

## **APPENDIX 1**

### **Clause 26 (National Bargaining Forum July 1, 1993 – June 30, 1994)**

Parties to the agreement

#### Employers

Associated Automotive Distributors (Pty) Ltd

BMW (South Africa) Pty LTD

Delta Motor Corporation (Pty) LTD

Man Truck and Bus (S.A.) (Pty) LTD

Mercedes Benz of South Africa (PTY) LTD

Nissan South Africa (PTY) LTD

South African Motor Corporation (PTY) LTD

Toyota South African Motors (PTY) LTD

Volkswagen of South Africa (PTY) LTD

#### Unions

National Union of Metal Workers of South Africa

S.A. Yster, Stall – En Verwante Nywerhede – UNIE

“This framework agreement has been negotiated in the context of an understanding by all parties (that is employers and employee representative/unions) that to ensure the long term viability of the South African Automobile Manufacturing Industry and to enhance job security for all employees, a new industry education and training dispensation needs to underpin changes in work organisation.”

The agreement has two key elements: namely agreement on a new skills based grading structure and an agreement on education and training to support changes to work organisation with the following objectives: These are:

- 26.1.1 “Creating a highly skilled and educated workforce which will support the manufacture of high quality, affordable vehicles for the domestic and international markets.
- 26.1.2 Creating a more healthy, satisfying and rewarding work environment.
- 26.1.3 Creating a new structure allowing the opportunity for an integrated career path with appropriate education, training and experience for those participating in the new structure. Such a structure must be seen as part of a new integrated national education and training system.
- 26.1.4 Facilitating flexible work organisation to meet the individual manufacturers and workforce needs.”

It is important to note that Clause 26 brings together in principle agreement not only the importance of education and training to the longer term survival of the South African Motor Manufacturing Industry but also agreements over new ways that this can be done - that is by creating a healthy and rewarding working environment together with a flexible organisation capable of meeting the needs of the industry and workforce.

## 26.2 DEFINITIONS

Clause 26 went so far as to define the content, terms and framework within which the industry would work. It thus served as an important guide to the development of the Multi-Skilling framework from which each member motor

manufacturing industry then used for developing their individual Multi-Skilling programmes.

Definitions relating to this agreement included but was not restricted to knowledge, education and skill. The parties, when negotiating definitions in the AMIETB agreed to resolve whether a single definition dealing with education and knowledge would suffice or whether separate definitions would be required. For example:

Module(s) wherever the word “module(s)” appear in this clause it should be read to include Core and Specialisation Modules as defined hereunder.

Core modules: Core modules will consist of such components as determined by the AMIETB within the guidelines of the NTB.

Specialisation modules: Specialisation modules will consist of such components as determined by the AMIETB within the guidelines of the NTB.

### 26.3 NATIONAL TRAINING BOARD / AMIETB:

The AMIETB will agree on all education and training related issues within the parameters of this clause and amendments to this clause by the parties to the AMIETB within the broad guidelines established by the NTB.

### 26.4 NEW SKILL BASED GRADING STRUCTURE AND TRAINING

The following section sets out in full the agreements reached by the NBF in matters relating to education and training of employees of members. I have detailed then in full because they show the clear commitments reached around issues of training and development.

#### 26.4.1 General Objectives

26.4.1.1 The provision of accredited education and training to meet identified and agreed needs is central to the successful implementation of the new structure.

- 26.4.1.2 The parties are committed to the objective that no employee will fail in the realisation of career potential for lack of access to adequate education and training provided however that the employee is interested, willing and capable of being trained.
- 26.4.1.3 The establishment of a certificate system for the grades below artisan and the new grades above artisan is central to the successful implementation of the new structure. This will consist of standardised modules and will lead to a recognised AMIETB qualification.
- 26.4.1.4 In developing an education and training strategy, the parties will have regard for the career aspirations of employees and the needs and requirements, both current and future, of each company.
- 26.4.1.5 The new structure will provide employees with AMIETB recognised qualifications that reflect a high level of education and training relevant to the Automobile Manufacturing Industry and shall in future articulate to certain elements of the existing and future artisan and above qualifications within an AMIETB qualification structure.
- 26.4.1.6 To provide a medium by which an upgrading of skills and knowledge can be facilitated and result in an AMIETB recognised qualification.
- 26.4.1.7 Provide an incentive for employees to undertake and build a career.
- 26.4.1.8 Provide an achievable and attainable training goal and hence act as an attraction to stay in the Industry.
- 26.4.1.9 Achieve a blend of education and training which provides a sound basis for further career path development in a range of fields that meet the manufacturers and employees' requirements.

#### 26.4.2. Skills Based Grading System

This section demonstrates the agreed grading structure in relation to new skills secured. It further demonstrates the extent and degree of commitment secured as

well as level of confidence expressed by all parties to a skills based grading system.

#### 26.4.2.1 New Skills / Grading Structure

The new skills and grading structure shall consist of seven grades being Labour Grades 1 to 7 inclusive, subject to:-

- (a) Progression of employees through labour grades 1 to 4 will be based upon AMIETB certified competencies at each skill level.
- (b) Progression of employees from labour grade 4 to labour grade 5, from July 1, 1993 being dependent on the existence of a vacancy and operational needs and will further be based on demonstrated competencies (ie. attainment of a trade certificate or an equivalent agreed by the AMIETB)
- (c) The practice of progression within the grading structure on the basis of effluxion of time will be discontinued, effective from July 1, 1993.
- (d) Uncertificated artisans will continue to be accommodated within labour grade 4.
- (e) Trade certificated artisans will continue to be accommodated within labour grade 5.
- (f) Multi-Skilled artisans, who have been certified in accordance with AMIETB requirements will be accommodated in labour grade 6.
- (g) Technicians will be accommodated within labour grade 7.
- (h) The AMIETB will finalise within this Industry framework the detail regarding Recognition of Prior Learning, module and curriculum development, skills standards, accreditation and certification subject to:
  - Priority attention be placed on labour grades 1 through to 4, for completion by no later than June 30, 1994.
  - Labour grades 5 through to 7 to be finalised by no later than June 30, 1995.



- In the event of a dispute within the AMIETB regarding the implementation of the provisions of (i) or (ii) above, such dispute shall be referred to the NBF for resolution.

#### 26.4.2.2 Participation in the new skills and grading structure

- (a) Existing employees will not be compelled to participate in education and training but will however be compelled to facilitate the acquisition of skills by those employees who participate in the education and training programme. Conversely new employees must undertake agreed education and training as a condition of service.
- (b) The parties agree to the principle of a probationary period in respect of all prospective employees in the Industry. The application of this probation in respect of the different categories of prospective employees will be agreed before the completion and implementation of the remaining provisions of this clause.

#### 26.4.2.3 Career Progression and Accreditation

- (a) Employers will be required to inform employees of career path choices.
- (b) Progression through the structure from base level 1 to level 7 will be dependent on work organisation and production requirements and the career aspirations of employees. Progression will only occur once competence has been demonstrated to the level of AMIETB agreed standards.
- (c) Each certificate and its appropriate modules shall articulate to certain elements of the other qualifications in the structure as determined by the AMIETB.

- (d) Each new level will have an AMIETB recognised qualification which consists of both core and specialisation modules with a range of options.
- (e) The new certificates will be awarded to employees in the Automobile Manufacturing Industry who have completed a course of education and training which is accredited by the AMIETB.
- (f) At each level employees' skill and knowledge will be recognised, and as such be portable. Employees who have completed all the skill and knowledge requirements for a particular skill level will be awarded an exit certificate.
- (g) To complete the requirements for a new certificate, an employee will have to be assessed as competent in terms of education, knowledge and skill standards determined by the AMIETB.
- (h) At all levels within the structure, employees will be required, to the levels of their training and competence obtained from the completion of AMIETB accredited skills standards to:
  - (i) Assist in the development and implementation of quality control techniques and practices.
  - (ii) Carry out rectification work to their level of training and competence.
  - (iii) Carry out maintenance and service work to their level of training and competence.
  - (iv) Assist in the development and implementation of policies and work procedures, to the level of their training and competence, in relation to:
    - Improving work organisation,

- Occupational health and safety, ergonomics and a sustainable environment.
  - The nature, role and responsibilities of teams,
  - Use and routine maintenance of appropriate tools and equipment.
  - Reduction in indirect and supervisory labour,
  - Improving production engineering and product “manufacturability”, including new products.
  - Consultation, information disclosure and communications procedures.
  - Use of computer equipment.
- (j) To perform a wide range of assignments to their level of training and competence.

#### 26.4.3 Recognition of Prior Learning / Skills Audit

26.4.3.1 Recognition of Prior Learning (RPL) of education and skill at the various levels of the classification structure will be evaluated and acknowledged in terms of the RPL models developed by the AMIETB within the guidelines determined by the NTB.

26.4.3.2 The AMIETB shall develop a framework for an education and skills audit to be conducted on each employee, at plant level, who elects to participate in education and training. The purpose of this audit will be to determine the education and training requirement by each individual employee.

#### 26.4.4 Module Development/Standardisation and Accreditation

##### 26.4.4.1 Development

- (a) Module and curriculum development will emerge from the process below and the agreed audit of available resources including existing artisan and plant specific training. This audit will be carried out by the AMIETB and be completed not later than September 30, 1993.
- (b) To facilitate the establishment of an industry framework the parties shall forward their requirements in respect of knowledge, skill and education to the AMIETB by June 30, 1994 or earlier, as required by their production process as well as their requirements in respect of:
  - (i) Core modules (e.g., communication)
  - (ii) Specialisation modules (i.e. Technical, administrative, quality and organisational training)
  - (iii) Number of plant specific modules (e.g. company production system)
- (c) Arising from this data and data obtained by the agreed audit of existing education and training, in terms of (a) above, the AMIETB will develop a broad framework comprising of core modules, specialization modules and plant specific modules.
- (d) This framework will specify the total number of knowledge, education and skill modules at each of the levels as well as the extent of core, specialisation and plant specific modules at each level.
- (e) The industry framework will include design, accreditation and administration of education and training programmes necessary to support career paths and progression of employees.
- (f) Within the parameters set by this framework the parties at plant level will negotiate and agree on the combination of modules that best suits operational requirements and employee needs.
- (g) The following serves as a broad guideline of module development subject to amendment by the AMIETB:

<u>NEW SKILL LEVEL</u>	<u>QUALIFICATION</u>	<u>QUANTUM EQUIVALENT</u>
Level 1	Certificate 1	20% artisan modules
Level 2	Certificate 2	40% artisan modules
Level 3	Certificate 3	60% artisan modules
Level 4	Certificate 4	80% artisan modules
Level 5	Artisan certificate Or equivalent Certificate Agreed by the AMIETB	100% artisan modules
Level 6	Multi-skilled  Artisan certificate	120%  Artisan modules
Level 7	Technician	140%  Certificate
Note:	Quantum and % value do not refer to content but to number of modules.	

#### 26.4.4.2 Standardisation

- (a) The basis of all qualifications throughout the Industry shall be standardised modules consisting of AMIETB recognised competency outcomes.
- (b) Modules shall fall into two broad categories:
  - (i) Core Modules (such as communications, mathematics or social environment) which will form the compulsory component of each qualification level. These modules will be developed and agreed by the AMIETB.
  - (ii) **Specialisation Modules** which will include all technical, skill, **administrative**, quality and organisational training.
- (c) Both the specialist and core modules will be developed and accredited by the AMIETB to standardised competency outcomes using existing resources, new resources and existing artisan training curricula where appropriate.
- (d) Included in specialisation modules are those modules which may be considered “in house” or plant specific. Such modules should satisfy the AMIETB that they are of equivalent educational value to other modules in this category. The AMIETB to determine and agree the maximum extent of “in house” or plant specific modules after completion of the process agreed on module development in 26.4.4 above.
- (e) All modules may be “contextualised” to reflect the language and practices of a particular plant in so far as this does not compromise AMIETB recognised competency outcomes for that module. The parties recognise that is inefficient use of the Industry’s resources to allow a proliferation of training modules with similar content but plant specific language. Variations to standard modules can be achieved through “contextualisation” of curriculum materials.

#### 26.4.4.3 Accreditation/Certification

The AMIETB shall be the sole accrediting and certification authority for training modules and skill standards used by the Industry.

#### 26.4.5 Funding

26.4.5.1 The parties reaffirm their commitment to the principles and functions of the AMIETB as set out in clauses 25.1 and 25.2 above respectively, and as set out in the constitution of the AMIETB.

26.4.5.2 The development of modules and skill standards will be funded by the employers collectively through an agreed contribution to be paid to the AMIETB and to be disbursed according to agreements reached. The employers will continue to fund work already agreed within the AMIETB and such additional functions.

26.4.5.3 The parties further agree that all skills or on the job training (e.g. welding) will take place in company time and will be paid at straight time rates.

26.4.5.4 In respect of all training and education the parties record that:

- (a) The employers have agreed to finance the resources required to facilitate literacy and numeracy training, for example, tutors, materials, equipment and physical facilities.
- (b) All knowledge (e.g. communications), training will take place in an employee's own time. Half of this time will be remunerated at straight time rates.
- (c) Parties need further indepth investigation into the educational needs of employees and the financing of the delivery of education to serve those needs.
- (d) Towards this end the parties agree:
  - (i) that each employer will do a sample audit by no later than October 31, 1993 to determine the numeracy and literacy levels in their

plants. This sample audit will be done within broad guidelines established by the AMIETB.

- (ii) That the consolidated results of the numeracy and literacy levels audit be compiled by the AMIETB and submitted to the parties to the NBF by no later than December 31, 1993.
- (iii) That a framework for the financing of additional education and training will be negotiated during the first NBF quarterly meeting in 1994, and any subsequent meeting thereafter, for finalisation by no later than June 30, 1994.
- (iv) The parties are committed to investigate all sources of funding within the proposed framework for the financing of additional education and training as per clause (iii) above. In the event that such sources are inadequate to meet the Industry framework needs, then the Work Security Fund monies shall be utilised to fund education and training on an agreed basis.

#### 26.4.5.3.1 Employees Entitlement to Training

All employees participating in the skills development programme will be entitled to do a minimum of two (2) AMIETB's accredited modules before the June 30, 1995 and thereafter and additional two (2) modules before the June 30, 1996 provided that the parties may negotiate and agree on additional training at Plant or Industry level if the need arises.

### 26.5. CHANGING WORK ORGANISATION AND FLEXIBILITY

26.5.1 The parties commit themselves to improving quality, productivity, and employment security in the Industry. The parties further agree that measures that focus solely on labour productivity and work intensification are a short sighted inefficient approach to this commitment.

26.5.2 Education and training form a part of a total approach to developing effective flexible work organisation. The focus of education and training shall be the



development of broad generic skills which give the foundation for flexible working arrangements rather than narrow task based training. Competency in core skill areas such as communications and mathematics are an essential prerequisite for effective work organisation and technical skill formation.

### 26.5.3 The Team Concept

- 26.5.3.1 The parties agree that the development of skills in isolation will not bring about the required improvement but that skills should be developed to support the new form of work organisation required to ensure the long term viability of the Industry.
- 26.5.3.2 It is recorded that excessive hierarchical structures and narrow task based labour are uncompetitive in modern manufacturing. It is therefore agreed that work teams will be introduced through negotiation at plant level within the parameters set by broad Industry guidelines.
- 26.5.3.3 It is further recorded that the parties are committed to negotiating Industry guidelines in respect of team work.
- 26.5.3.4 To facilitate this commitment the following is agreed by the parties.
- (a) The parties commit themselves to meet once per month in the NBF Job Security and Productivity sub-committee to finalise, by June 30, 1994, or sooner, Industry guidelines on teamwork.
  - (b) Existing team arrangements will continue until Industry broad guidelines have been established. Once these Industry guidelines have been finalised, all teams in the Industry will conform with the new guidelines.
  - (c) The parties accept that the skill development arising from the new education/training dispensation can only be effectively harnessed through implementing changes in work organisation. Accordingly the parties undertake to finalise the guidelines on changes to work organisation (teamwork) prior to the finalisation of the new module and curriculum development in the AMIETB to ensure that training and

education in terms of the new Industry framework support the future requirements of work organisation.

## 26.6 TRANSITION PHASE

The transition period will be dealt with as follows:

26.6.1 Present job titles and grading structures will remain for the transition period.

26.6.2 All employees will transfer from the existing grading system to the new skills classification system (eg Grade 1 employee will become a skill level 1 employee).

26.6.3 As soon as Recognition of Prior Learning instruments have been finalised by the AMIETB, employees who participate in the skills development programme will be assessed.

26.6.4 An employee will only move across to a new skill level once it has been finalised and accredited and the employee has satisfied all the requirements (core, specialisation and plant specific modules) for that level and the preceding levels. Skills recognised by the RPL model will be accredited and will not have to be repeated.

26.6.5 An employee will not be downgraded if the skills assessment proves that he/she lacks the skill requirement for the appropriate new skill level.

26.6.6 An employee who qualifies for a new skill level in terms of the above, will receive the wages linked to that particular skill level.

## 26.7 INSPECTION / RELIEF / ALLOWANCE

The parties recognise that, central to the new certificate structure, is the requirement that employees perform work to the level of their certification and competence. It is also agreed that, at all levels, employees will be responsible for the quality of their own work to their level of certification and competence and, as required, the overall quality of the component/product as it passes through the work station/area.

Accordingly the parties agree that various allowances paid to “relief” “pool” or “absence cover” employees will be discontinued by notice to the unions, local and head office, once the new training dispensation has been implemented.

#### 26.8 EMPLOYMENT SECURITY

No employees will be retrenched solely as a result of changes implemented in accordance with the provisions of clause 26.

Through improved quality, productivity and the achievement of production schedules on an ongoing basis, employment security will be enhanced.

This undertaking does not apply to issues which threaten the viability on competitive efficiency of a company. These issues will be dealt with in terms of clause 21 above.

#### 26.9 TERMS AND REVIEW OF PROGRESS OF AGREEMENT

The operation of this agreement and this transition process will be reviewed annually by the parties. The purpose of the joint review shall be to determine the extent to which the agreement is achieving its objectives, to identify problem areas and to negotiate and agree amendments which will facilitate improvements in the operation and implementation of this agreement.

## **APPENDIX 2**

### **AUTOMOBILE MANUFACTURING INDUSTRY QUESTIONNAIRE**

THE QUESTIONNAIRE AS WAS COMPETED BY RESPONDENTS FROM  
WITHIN THE AUTOMOBILE MANUFACTURING INDUSTRY

## ANNEXURE 2

**QUESTIONNAIRE**

	YES	NO
1. IS YOUR COMPANY AFFILIATED TO THE NBF?		
2. IS YOUR COMPANY INVOLVED IN THE DEVELOPMENT OF THE NATIONAL MULTI-SKILLING FRAMEWORK?		
3. CAN YOU OFFER AN EXAMPLE OF YOUR COMPANY'S SPECIFIC ADOPTED FRAMEWORK THAT IS IN LINE WITH THE NATIONAL FRAMEWORK POLICY?		
4. WAS YOUR IN-HOUSE FRAMEWORK AGREED TO BY THE FOLLOWING ROLE PLAYERS? <ul style="list-style-type: none"> <li>• HR PERSONNEL</li> <li>• LINE MANAGEMENT</li> <li>• TRAINING</li> <li>• SHOP STEWARDS</li> </ul>		
5. IS YOUR ADULT BASIC EDUCATION (A.B.E) PROGRAMME IN PLACE?		
6. ARE YOUR CORE MODULES DELIVERED AS FOLLOWS TO THE EMPLOYEES? <ul style="list-style-type: none"> <li>• ON THE JOB TRAINING</li> <li>• PART TIME TUITION</li> <li>• DISTANCE LEARNING</li> </ul>		
7. TECHNICAL TRAINING, IS IT DELIVERED IN THE FOLLOWING MANNER: -? <ul style="list-style-type: none"> <li>• ON THE JOB TRAINING</li> <li>• OFF THE JOB TRAINING</li> </ul>		
8. HAVE YOUR EMPLOYEES SHOWN AN INTEREST IN THE MULTI-SKILLING PROGRAMME?		

	MALE	FEMALE
9. INDICATE AS TO HOW MANY EMPLOYEES ARE PRESENTLY PARTICIPATING ON THE FOLLOWING PROGRAMMES:- <ul style="list-style-type: none"> <li>• ADULT BASIC EDUCATION – <u>CORE MODULES</u> <ul style="list-style-type: none"> <li>◦ FULL TIME TUITION</li> <li>◦ PART TIME TUITION</li> <li>◦ DISTANCE LEARNING</li> <li>= <u>TECHNICAL TRAINING</u></li> <li>◦ ON THE JOB TRAINING</li> <li>◦ OFF THE JOB TRAINING</li> </ul> </li> </ul>		
	POSITIVE	NEGATIVE
10. INDICATE THE PERCEPTION OF LINE MANAGEMENT IN RESPECT OF THE MULTI-SKILLING PROGRAMME WITH A POSITIVE OR A NEGATIVE.		
11. INDICATE THE PERCEPTION OF YOUR TRAINING DIVISION IN RESPECT OF THE MULTI-SKILLING PROGRAMME WITH A POSITIVE OR A NEGATIVE		
12. INDICATE THE PERCEPTION OF YOUR SHOP STEWARDS IN RESPECT OF THE MULTI-SKILLING PROGRAMME WITH A POSITIVE OR A NEGATIVE		
13. INDICATE THE PERCEPTION OF YOUR EMPLOYEES IN RESPECT OF THE MULTI-SKILLING PROGRAMME WITH A POSITIVE OR A NEGATIVE		
	MALE	FEMALE
14. HOW MANY EMPLOYEES HAVE ACHIEVED THE 8 x CORE MODULES TO DATE?		
15. HOW MANY EMPLOYEES HAVE ACHIEVED THE PRESCRIBED 24 CREDITS.		
16. INDICATE BELOW HOW MANY NATIONAL CERTIFICATES WERE ISSUED TO YOUR EMPLOYEES ON:- <ul style="list-style-type: none"> <li>• LEVEL TWO</li> <li>• LEVEL THREE</li> <li>(A.M.I.C) • LEVEL FOUR</li> </ul>		



**APPENDIX 3**

**TOYOTA SA MULTI-SKILLING INTERVIEW SCHEDULES**

THE INTERVIEW SCHEDULE AS FILLED IN BY RESPONDENTS FROM  
WITHIN TOYOTA SA LTD.



**ANNEXURE 3****TOYOTA SA MULTI-SKILLING INTERVIEW SCHEDULE**

NAME OF EVALUATOR		SECTION AREA:	
TELEPHONE NUMBER			
DIVISION/DEPARTMENT			
NUMBER OF SKILL LEVEL 1 – 4 EMPLOYEES UNDER YOUR CONTROL			
1. DO YOU EXPERIENCE AN INCREASE IN THE FLEXIBILITY OF THE MULTI- SKILLING CANDIDATES (in other words, can you use the employees on the multi-skilling programme on more jobs than before)?		YES	NO
		Comment: _____ _____	
PLEASE PROVIDE SOME EXAMPLES, IF NO, PLEASE INDICATE WHY NOT?  _____ _____ _____ _____			
2. DO THE MULTI-SKILLED EMPLOYEES DELIVER BETTER WORK THAN BEFORE?		YES	NO
IF SO, WHICH ASPECTS HAVE IMPROVED? _____ _____ _____ _____			
IF NOT, WHY DO YOU FEEL IT HAS NOT IMPROVED? _____ _____ _____ _____			

3. SO THE MULTI-SKILLED EMPLOYEES DISPLAY A BETTER UNDERSTANDING OF THE ASPECTS AFFECTION PRODUCTION (EG LINE BALANCING ETC.)	YES	NO
	IF SO, WHICH ASPECTS? _____	
	_____	
	IF NOT, WHICH ASPECTS ARE CAUSING PROBLEMS? _____	
_____		
4a) IN YOUR OPINION, DO INCREASED LEVELS OF ABE (ADULT BASIC EDUCATION) CONTRIBUTE TO THE WORK SITUATION?	YES	NO
	IF SO, HOW? _____	
	_____	
	_____	
4b) REGARDING ATTITUDE, PLEASE COMPLETE THE FOLLOWING TABLE:		
DO THE MULTI-SKILLED EMPLOYEES DISPLAY HIGHER LEVELS OF:	YES/NO	HOW MUCH
VALUE		
LOYALTY TO WORK		
RESPECT TO OTHERS		
POSITIVENESS		
PUNCTUALITY		
HELPLEFULNESS		
CO-OPERATION		
TEAMWORK		
WILLINGNESS TO TEACH OTHERS		
WILLINGNESS TO IMPLEMENT NEW IDEAS		

5. HAS THE MULTI-SKILLING PROGRAMME ASSISTED YOU IN ACHIEVING YOUR OBJECTIVES?	YES	NO
<p>IF SO, HOW? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		
<p>6. WHICH ASPECTS OF THE MULTI-SKILLING PROGRAMME NEEDS TO BE IMPROVED FOR YOU TO ACHIEVE YOUR OBJECTIVES EFFECTIVELY?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		
7. ARE YOU AND YOUR STAFF FULLY CONVERSANT WITH ALL THE PRINCIPLES AND PROCEDURES OF MULTI-SKILLING?	YES	NO
<p>IF NOT WHICH ASPECTS DO YOU FEEL YOU WANT/NEED TO KNOW MORE ABOUT? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		

8. DO YOU SEE ANY LINKAGE BETWEEN TOYOTA PRODUCTION SYSTEM AND MULTI-SKILLING?	YES	NO
<p>IF SO, HOW? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		
<p>9. WHAT DID YOU LEARN FROM TPLT (FOR THOSE WHO ATTENDED TPLT TRAINING) THAT CAN BENEFIT THE MULTI-SKILLING PROGRAMME?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		
<p>10. ANY OTHER COMMENTS?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>		

THANK YOU FOR YOUR TIME AND EFFORT TAKEN TO FILL OUT THIS QUESTIONNAIRE

## **APPENDIX 4**

### **AUTOMOBILE MANUFACTURING INDUSTRY**

#### **MULTI-SKILLING DESCRIPTIVE GUIDE**



# MULTI-SKILLING

*YOUR WAY TO GET AHEAD IN THE  
AUTO INDUSTRY*

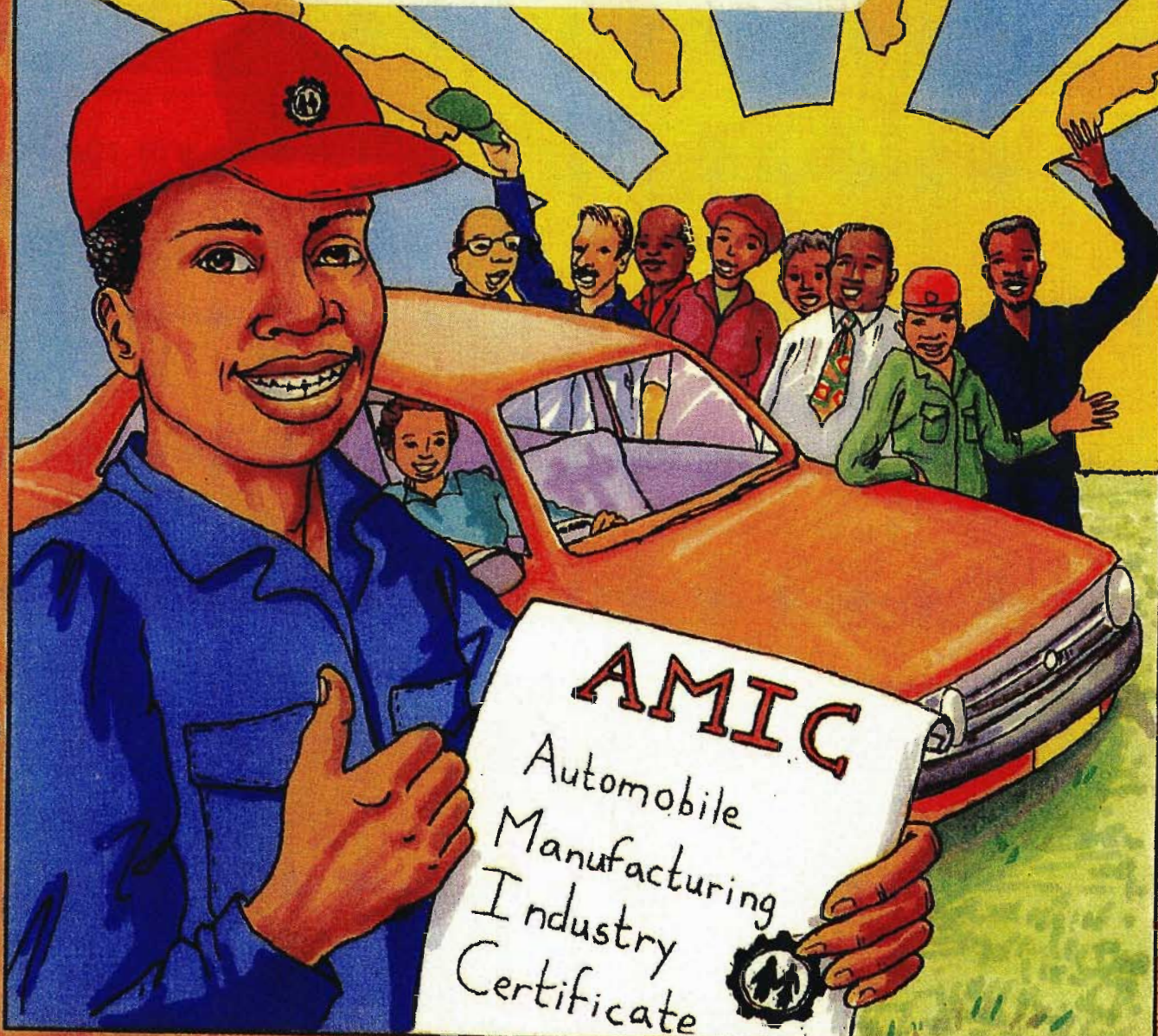


**TOYOTA**

TSA Automotive  
Components

Reg No 61/01767/07

**B PLANT**  
Prospecton







## **WHAT WILL I LEARN FROM THIS BOOKLET?**

**What Multi-skilling is**

**How Multi-skilling helps me and the Company**

**What Skills Levels and Credits are**

**What Skills Training is**

**What Recognition of Prior Learning is**

**How to get Training**

**How this benefits me**

**How this benefits the Company**

**When Multi-skilling starts and how to be part of it**



2nd Floor Harrington House  
Barnack Street Cape Town 8001  
tel: (021) 461 6399  
Fax: (021) 461 4106

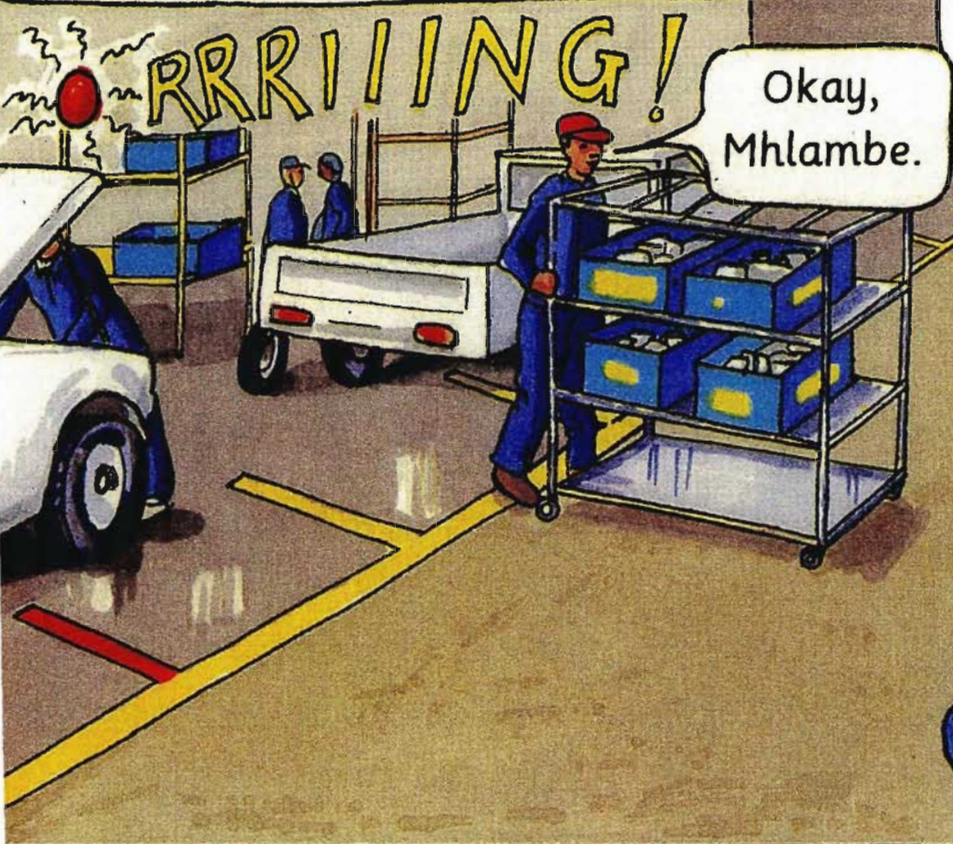
**This publication is developed and produced by the Educational Support Services Trust on behalf of the Automobile Manufacturing Industry Education and Training Board.**





Monday morning on the assembly line...

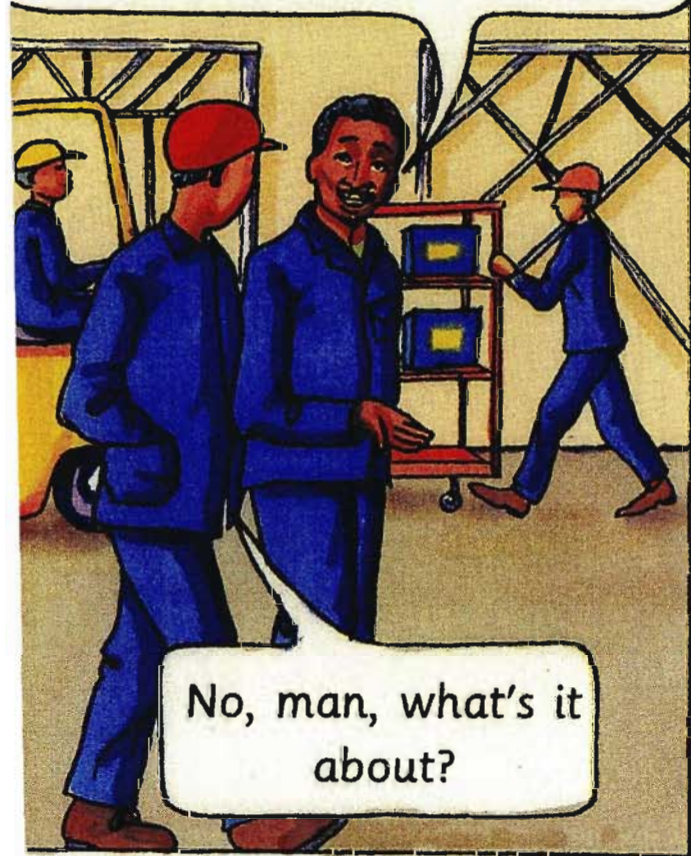
Hey, Themba, let's go for lunch!



Okay, Mhlambe.



Things are soon going to change around here. Have you heard about **Multi-skilling**?

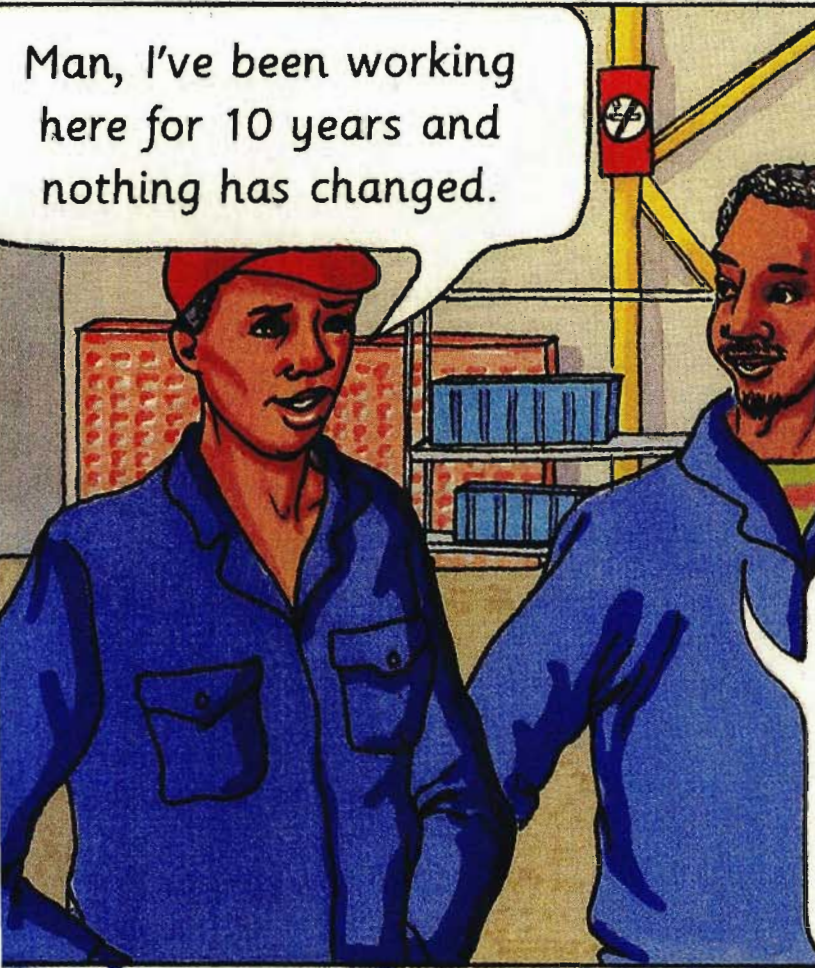


No, man, what's it about?


We were told about it at our meeting, and it sounds like it will give us new skills at work.








Man, I've been working here for 10 years and nothing has changed.

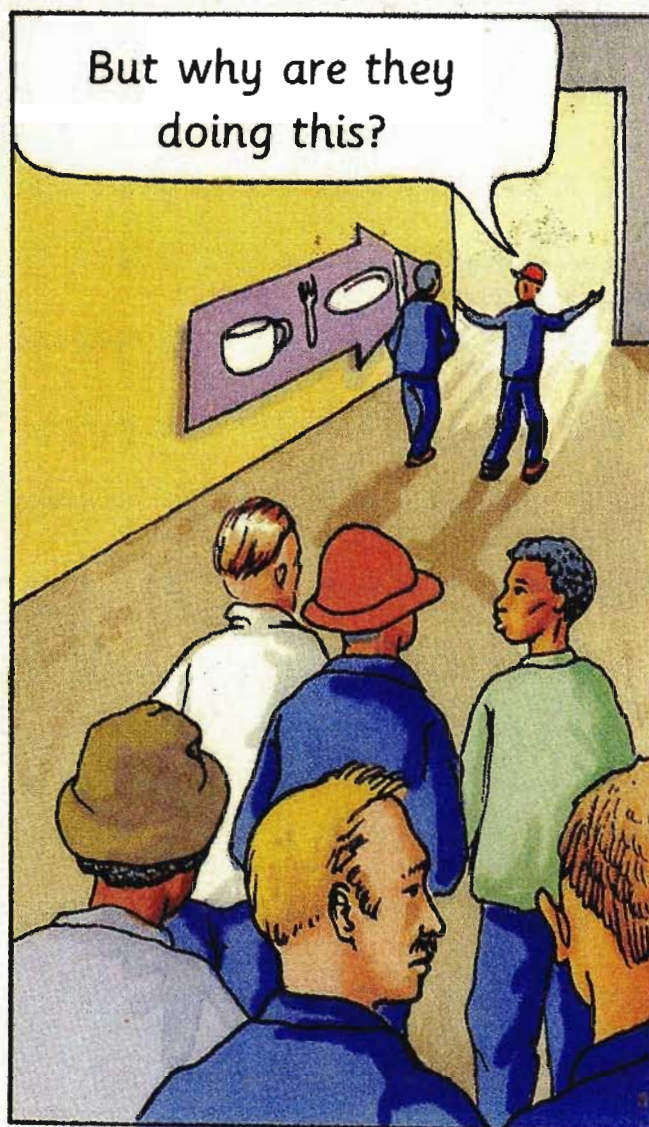


But this is not only for our company. All the car makers in South Africa, as well as our union, have decided to go this way.



Mmmm, so tell me more!

There will be a **new training system** for workers who are now on grades 1-4. (These are workers below the level of artisan.)



But why are they doing this?



As you know, the car industry has competition from overseas. The best way to make sure we stay in business is to **improve the education, knowledge**

**and skills levels** of the people who build the cars.



Well, I can understand that the *company* will do better with well trained workers, but what do we gain as workers?



We will also be better off. In the old system our jobs belonged to different grades. Our jobs decided our pay. In this new system our

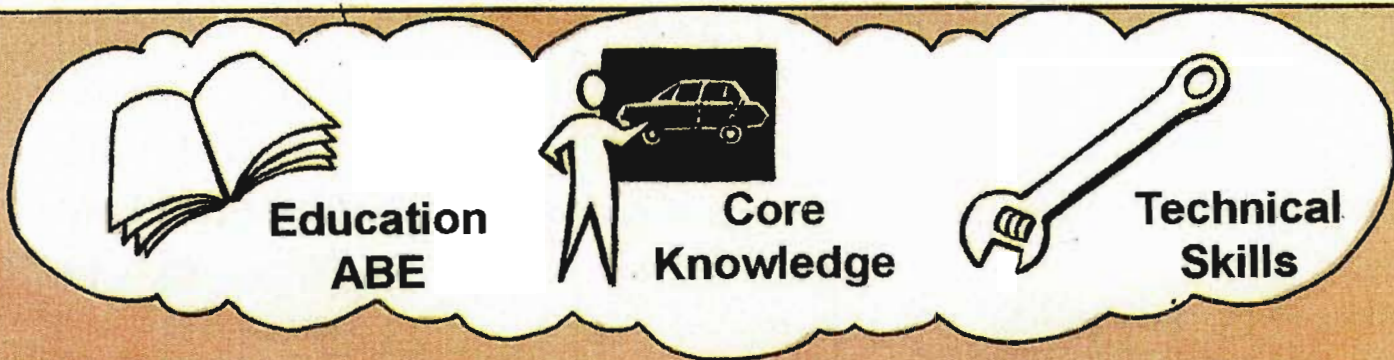
pay will depend upon our

**education, knowledge and skills.**

**And we will get a chance to improve these**



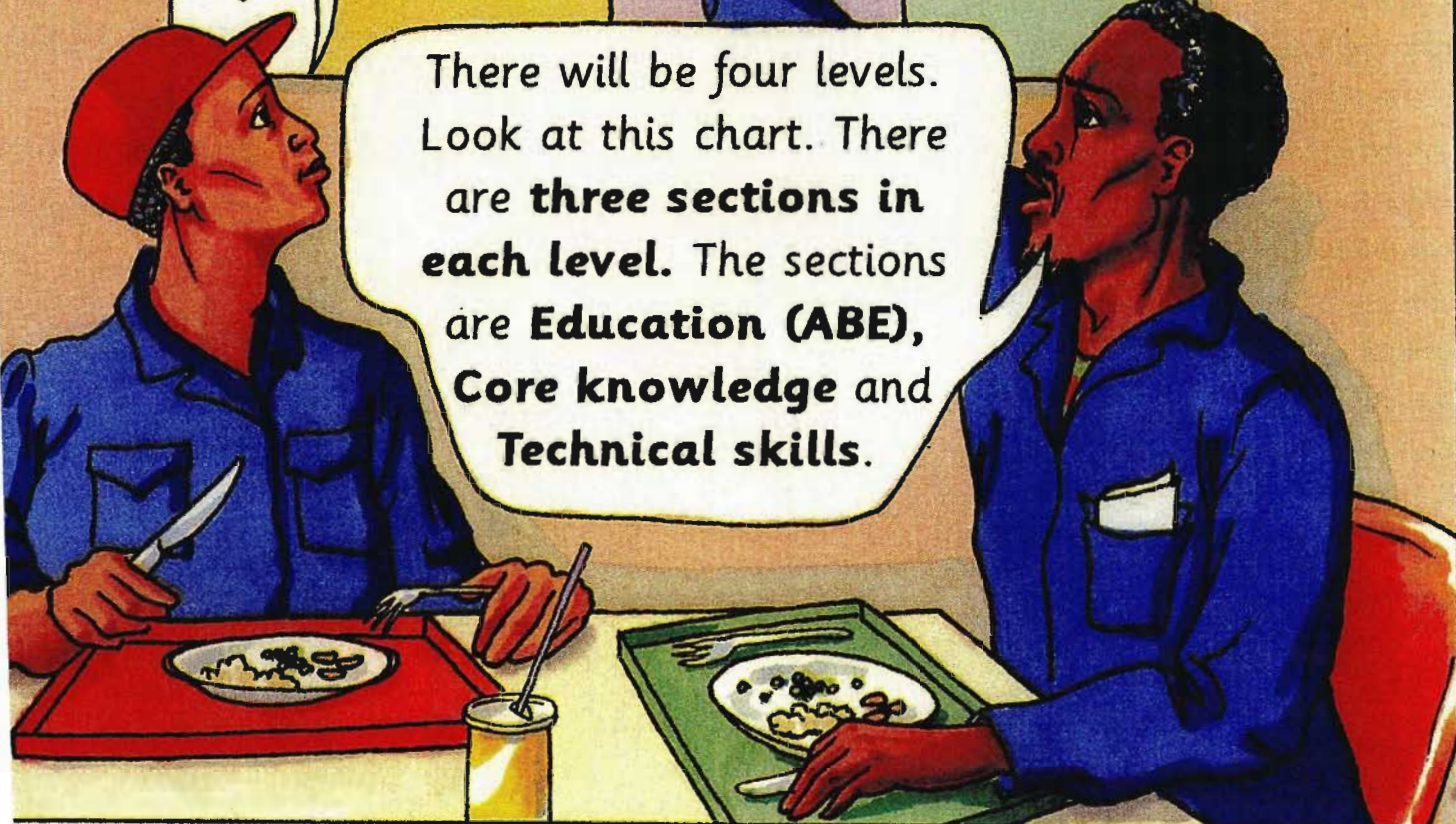






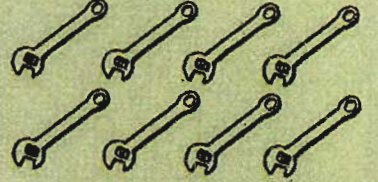



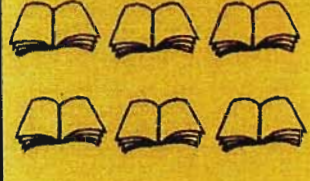


	EDUCATION (ABE)	CORE KNOWLEDGE	TECHNICAL SKILLS
4			
3			
2			
1			

How can we do this?

There will be four levels. Look at this chart. There are **three sections in each level**. The sections are **Education (ABE)**, **Core knowledge** and **Technical skills**.





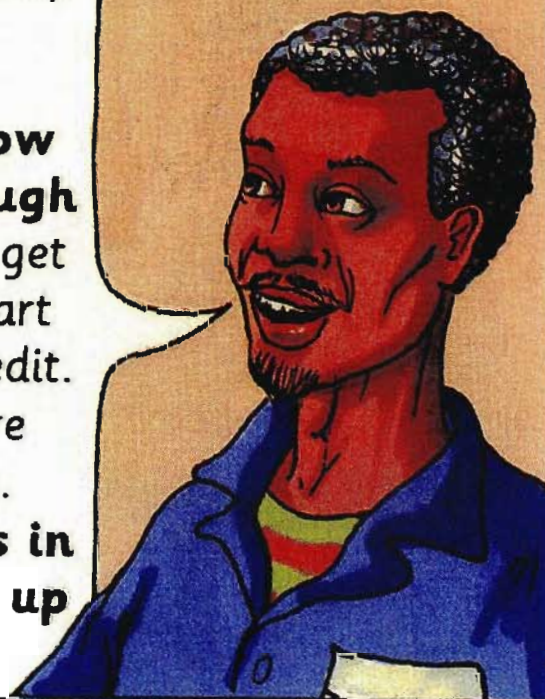
Levels	Education (ABE) Credits	Core Knowledge Credits	Technical Skills Credits
4	 <b>8 education credits</b>	 <b>8 core credits</b>	 <b>8 skills credits</b>
3	 <b>8 education credits</b>	 <b>8 core credits</b>	 <b>8 skills credits</b>
2	 <b>6 education credits</b>	 <b>8 core credits</b>	 <b>8 skills credits</b>
1			

You need to do enough training in each of these sections in order to move up the **levels** of the Skills Ladder. Every time you move up a level you will get more pay.

Once you have learnt new skills and **show that you can perform them well enough** to meet the technical standard, you will get **credit**. Some modules will give you a part credit while others will give you a full credit.

You also get credits when you pass core knowledge modules or education tests.

**When you have the necessary credits in each level, you will be able to move up to another level.**





I still don't really understand what these Education, Core knowledge and Skills sections are about.

Streams

- + Trim Manufact.
- + Truck Assy
- + Fabrication
- Hardware
- + Autom.
- Plastic

- + Assembly
- + Assy
- machining
- housing

Education is **Adult Basic Education**.

It is mainly English, Reading and Writing, and Maths. The **Core Knowledge modules** will give us a general understanding of our business, the auto industry. These are the subjects you will do.

Core  
• Health  
• Teamwork  
• Communication  
• Quality

- + Assembly
- + Engine Assy
- machining
- housing

- Hardware
- + Automotive
- Plastics

Hullo, guys! What are you talking about?



Hullo, Pete. We are talking about Multi-skilling.

Oh yes. I want to ask you - what is **Skills Training**?

Skills Training teaches us the skills we need in our work areas. Each person will be trained in the skills needed in his own **stream**, e.g. the Paint Shop Stream, the Assembly Stream, the Warehousing Stream, etc.

### STREAMS

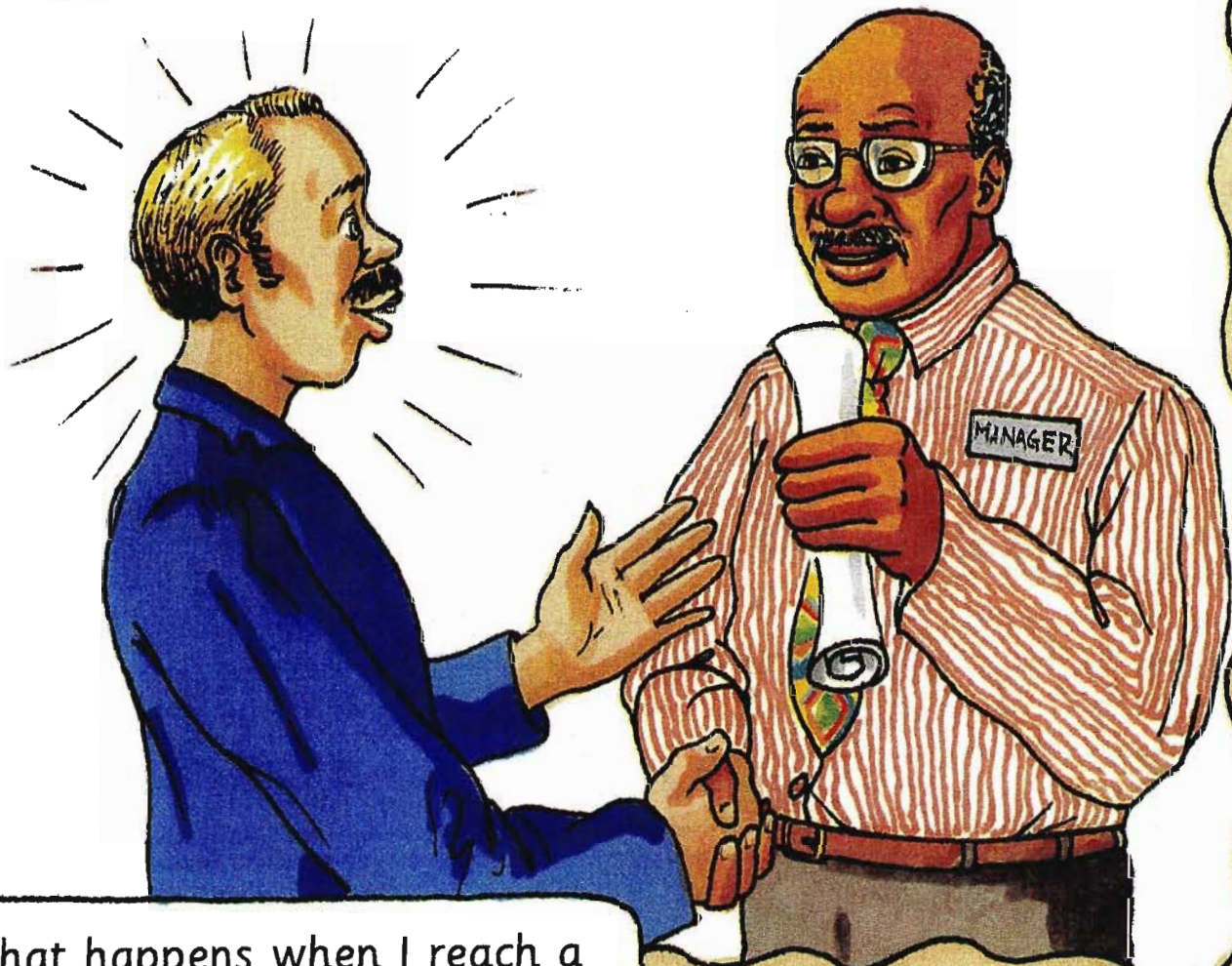
- + Press
- + Body
- + Paint
- + Assembly
- + Engine Assy
- + Engine Machining
- + Warehousing

- + Trim Manufact.
- + Truck Assy
- + Fabrication
- + Hardware
- + Automotive
- + Plastics

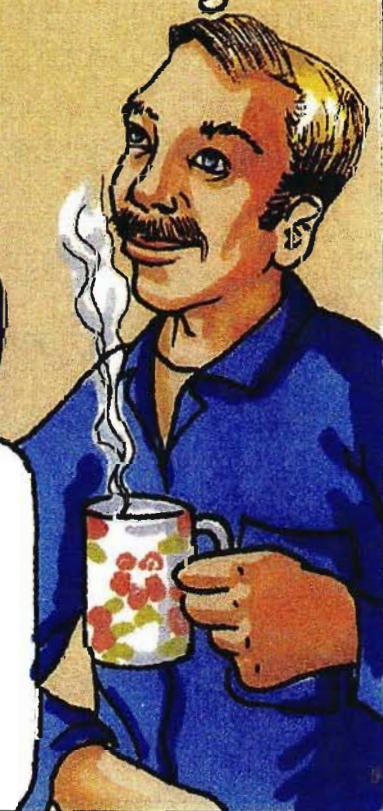
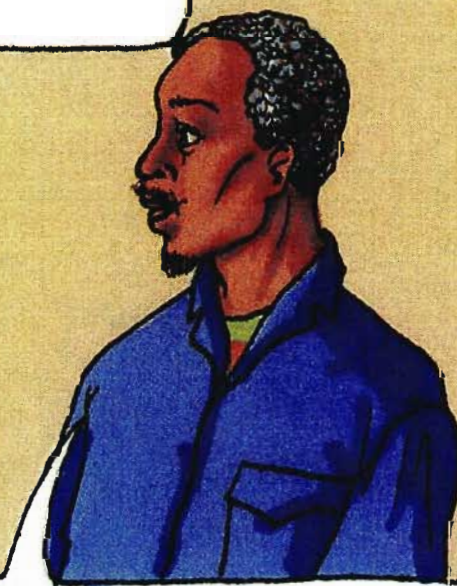
Does this mean that since I work in Assembly, I would have to do the Assembly Stream skills courses?

Exactly! You will have a **career path** in the stream where you work.



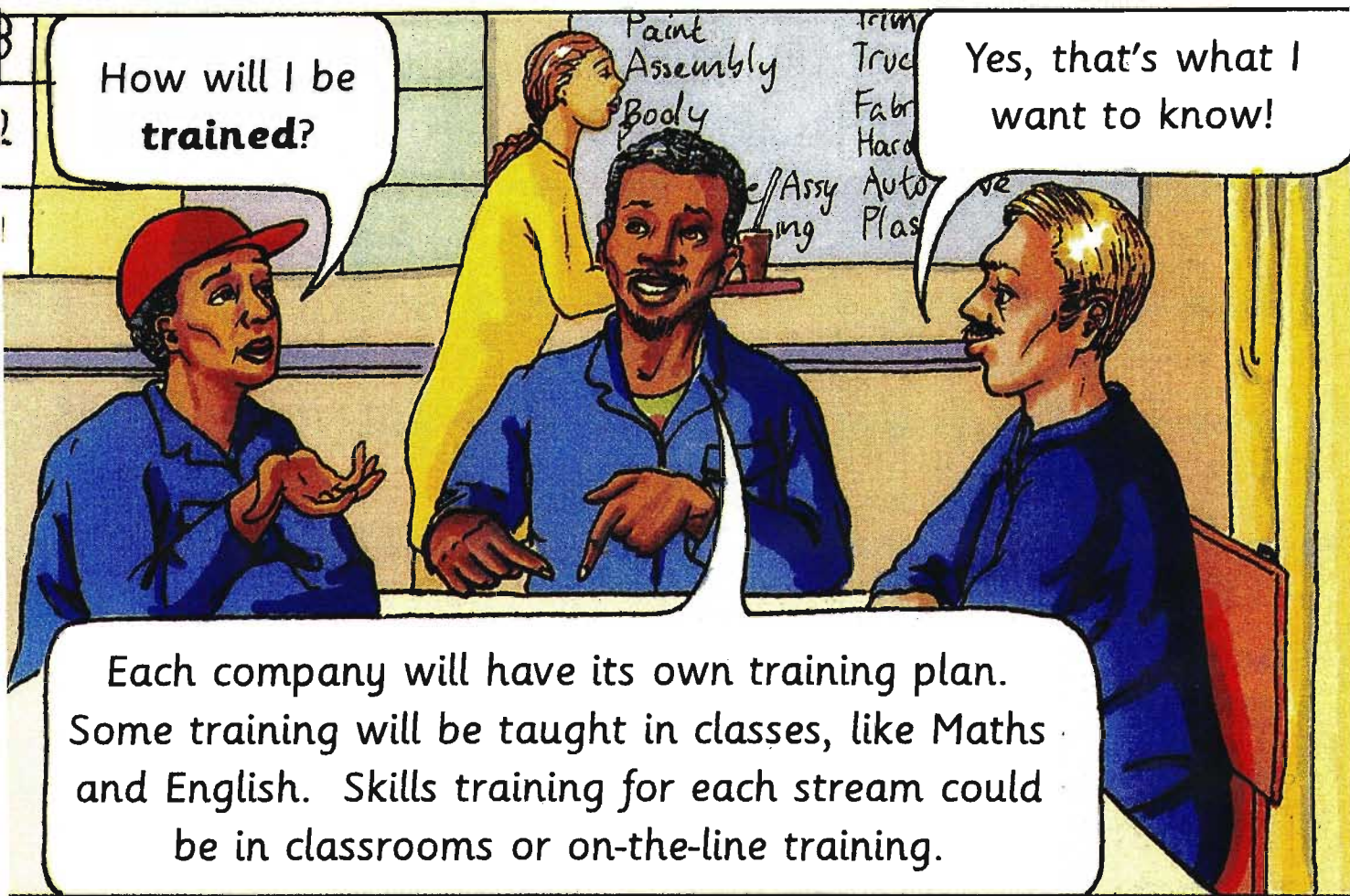


What happens when I reach a new level?



When you successfully complete each level you get a certificate. And once you complete level 4 you get the **Automobile Manufacturing Industry Certificate (AMIC)**. This will be the highest certificate of recognition for people below the level of artisan.







RRRIING!!

This means that you will be able to ask for **credits** for the education, core knowledge and technical skills that **you already have**.

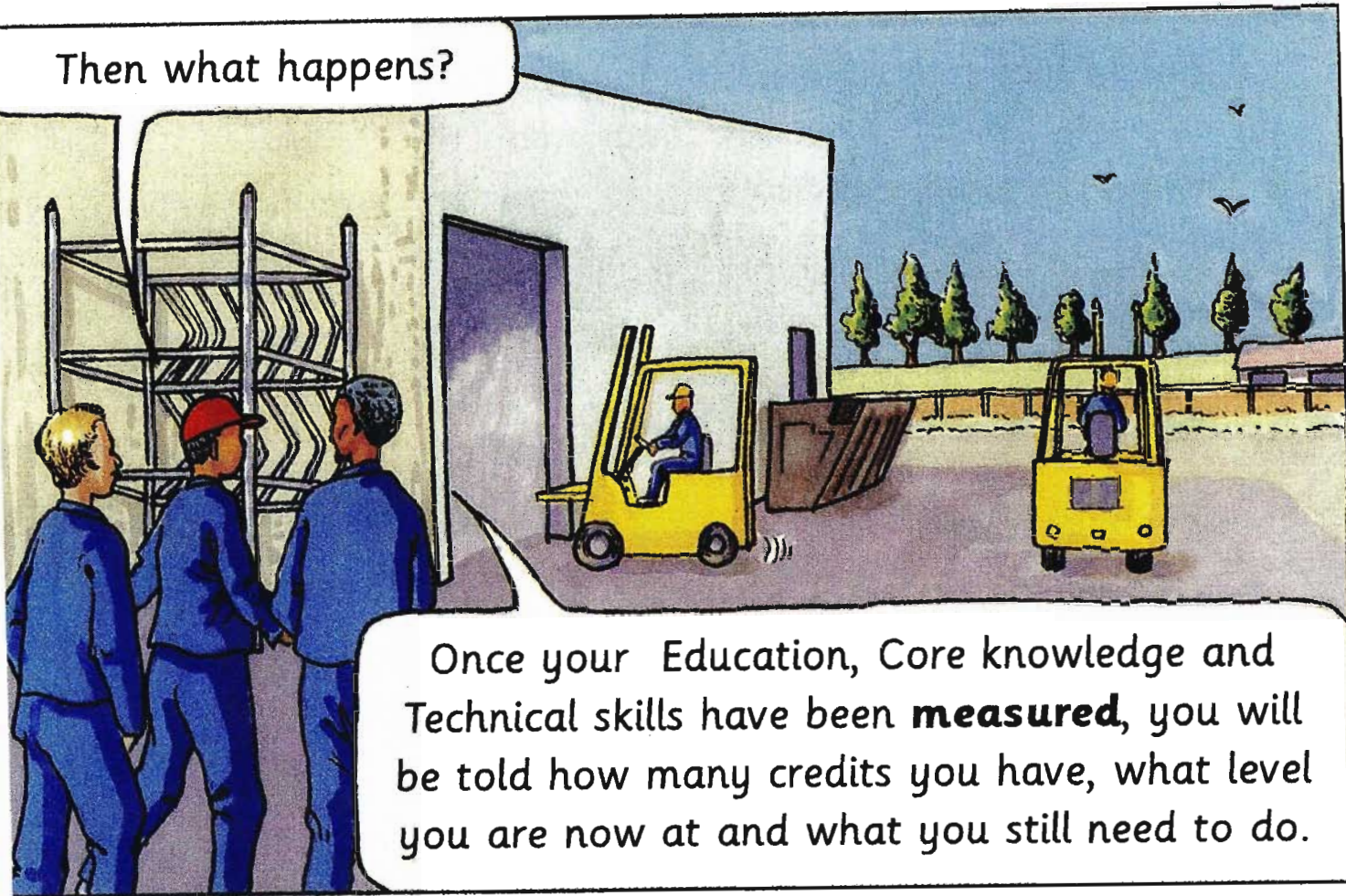
There goes the siren. Time to go back to work, guys!

Must I show that I already have education, knowledge and skills?

Yes, you may be asked to do this. Then **a team of people**, including a union representative, **will measure your skills**.

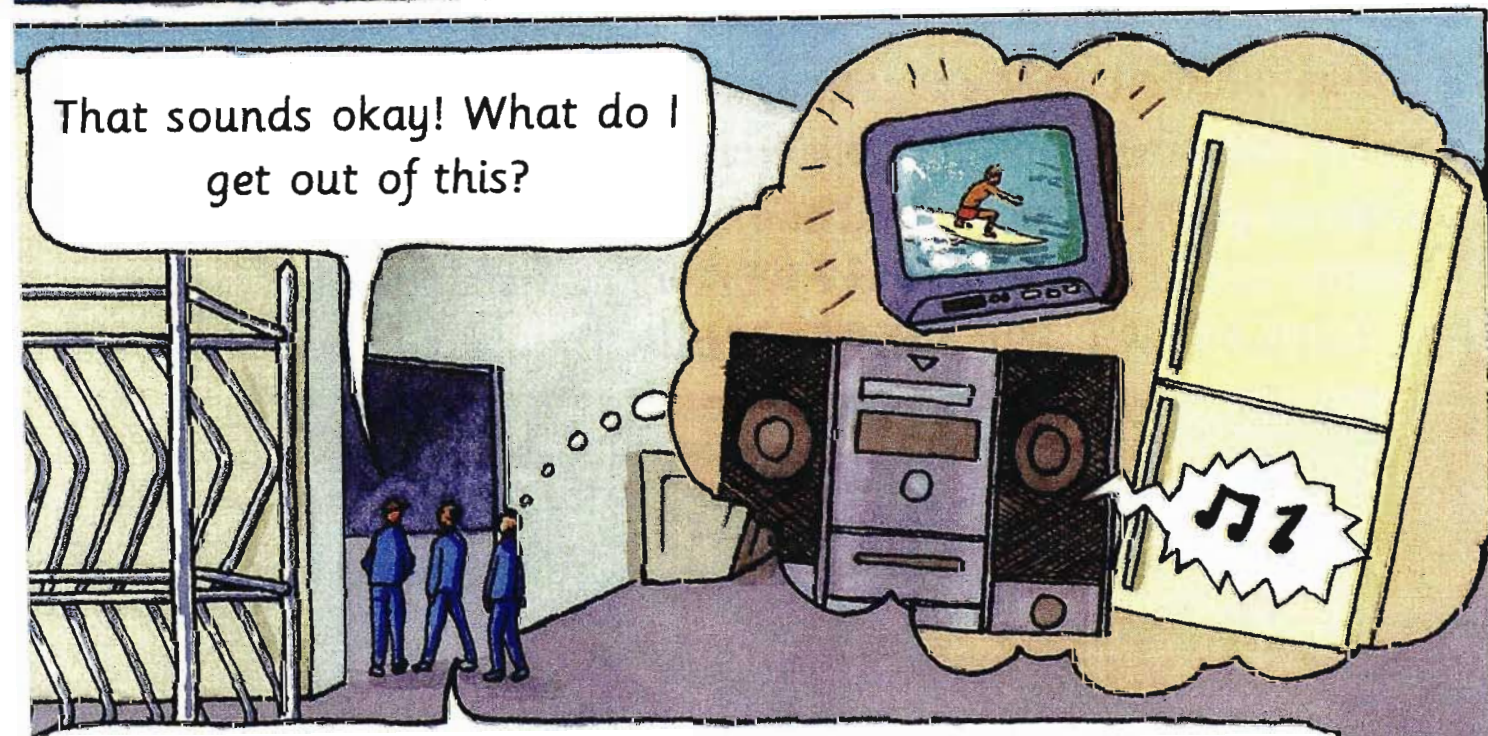


Then what happens?



Once your Education, Core knowledge and Technical skills have been **measured**, you will be told how many credits you have, what level you are now at and what you still need to do.

That sounds okay! What do I get out of this?



You will be able to earn **more money** in future without worrying about the old job grading system. Everyone will be able to get ahead at their own speed. Another good thing is that this AMIC Certificate will be accepted at all Auto plants in South Africa.



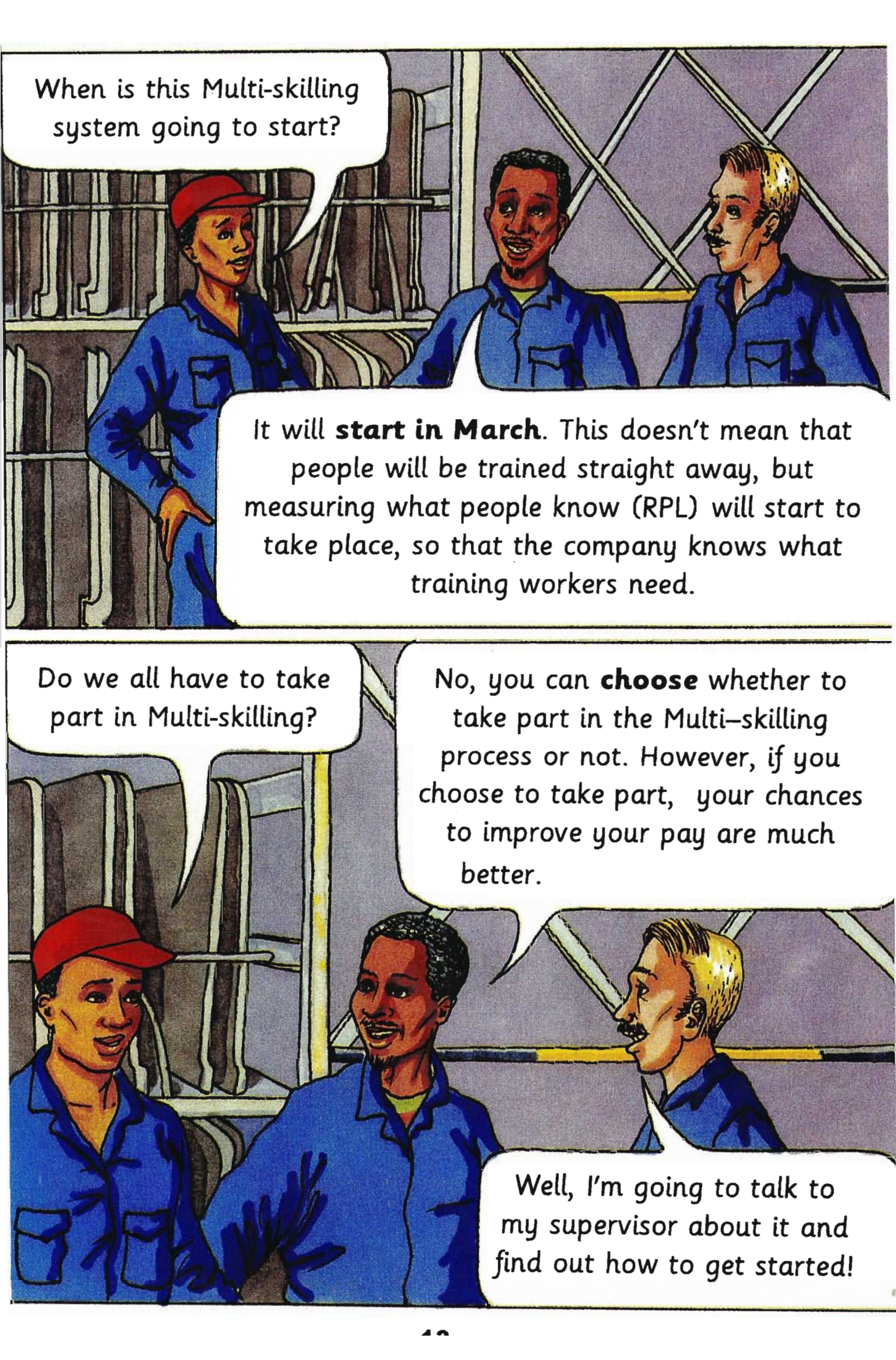
You said earlier that all this training will help us compete with overseas companies. How does that work?

Well, Themba, it's like this...

If workers have better education, knowledge and skills, they will be able to work in a more flexible way in their stream. The companies can arrange the work so that the workers use their knowledge and skills in the best way. More workers can also be given **more responsibility**.







When is this Multi-skilling system going to start?

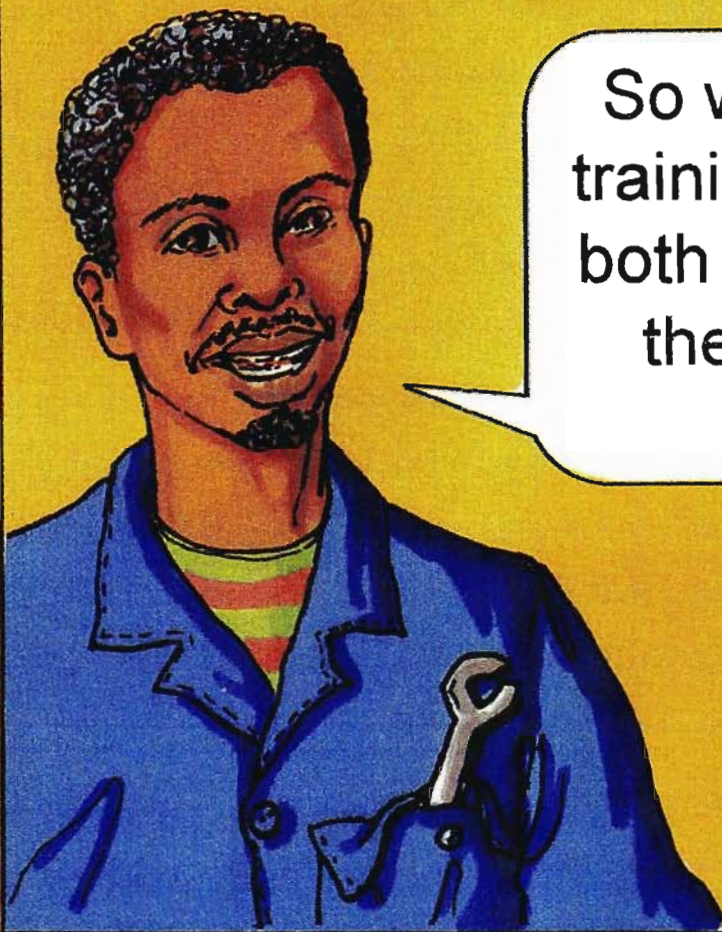
It will **start in March**. This doesn't mean that people will be trained straight away, but measuring what people know (RPL) will start to take place, so that the company knows what training workers need.

Do we all have to take part in Multi-skilling?

No, you can **choose** whether to take part in the Multi-skilling process or not. However, if you choose to take part, your chances to improve your pay are much better.

Well, I'm going to talk to my supervisor about it and find out how to get started!





So with multi-skilling  
training programmes,  
both the workers and  
the company are  
winners!

**IF YOU HAVE ANY QUESTIONS ABOUT  
EDUCATION AND TRAINING, TALK TO  
YOUR SUPERVISOR, THE TRAINING  
DEPARTMENT OR UNION  
REPRESENTATIVES.**



2nd Floor Harrington House  
Barrack Street Cape Town  
8001

tel: (021) 461 6399

Fax: (021) 461 4198

